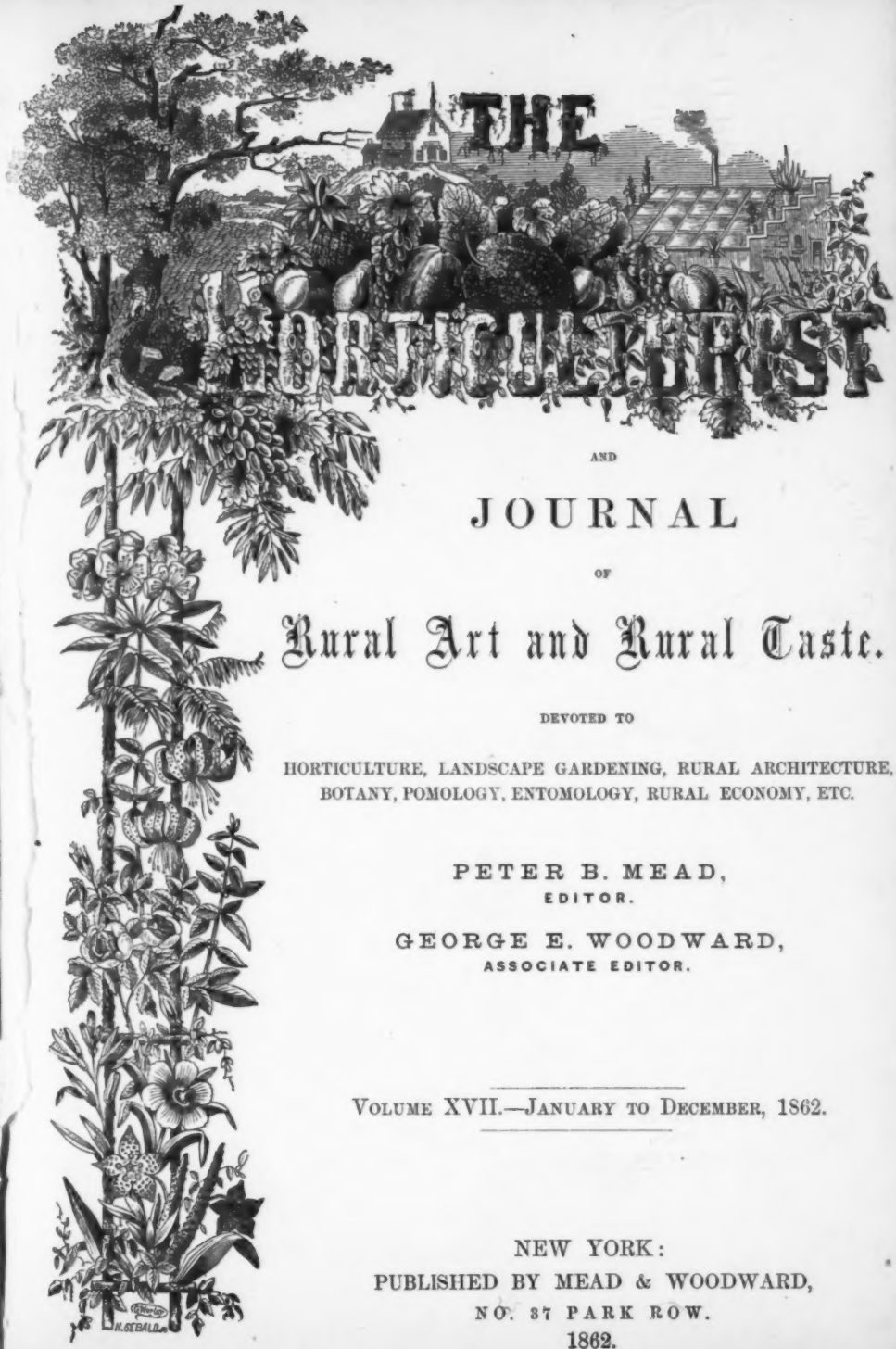

THE HORTICULTURIST

AND

JOURNAL

OF

Rural Art and Rural Taste.

DEVOTED TO

HORTICULTURE, LANDSCAPE GARDENING, RURAL ARCHITECTURE, BOTANY, POMOLOGY, ENTOMOLOGY, RURAL ECONOMY, ETC.

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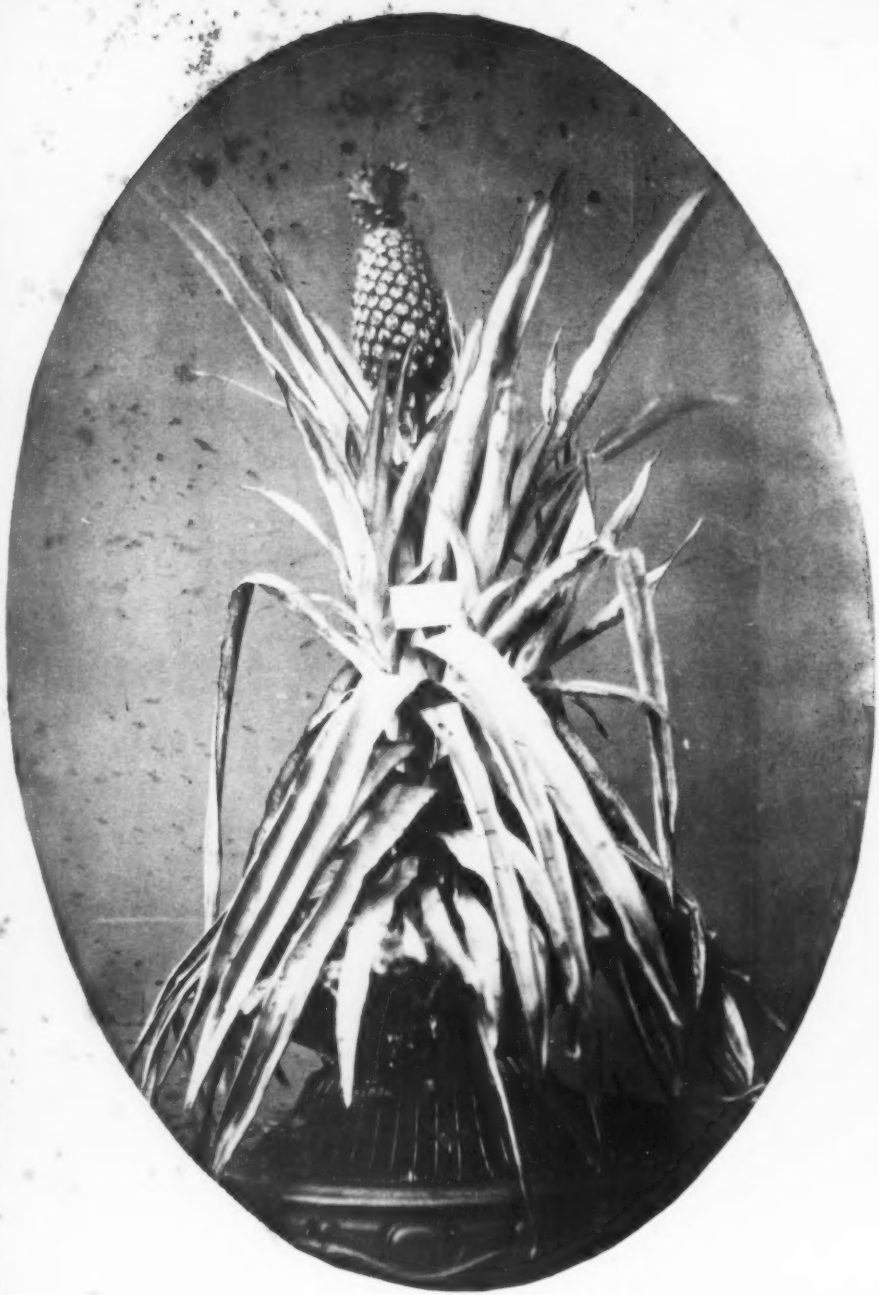

RESIDENCE OF T. M. RIANHARD, Esq.

PENDLETON AVENUE. NEW BRIGHTON, S. I.

THE

HORTICULTURIST.

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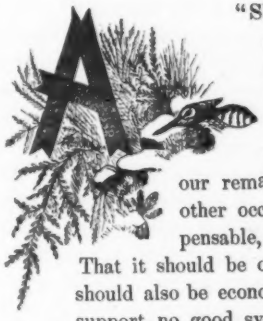
Hints on Grape Culture.—XI.



"SUBSCRIBER" would like to hear something now about the kind of stakes to be used in the vineyard, so that he may be getting them out during the winter. Our own thoughts had been running that way, and the present would not be an inopportune moment to say something on the subject. We shall confine our remarks to the vineyard, leaving the garden, etc., to another occasion. Some kind of support for the vine is indispensable, though precisely what is the best all are not agreed. That it should be of some durable material is very desirable; that it should also be economical, is equally desirable. Without some kind of support, no good system of training can be successfully carried out, for the vine will not support itself; and to let it trail on the ground would simply be to sacrifice both vine and fruit. The cost of stakes or a trellis, it must be acknowledged, forms a no inconsiderable item of expense in grape culture, but one which can not be avoided. There are two kinds of support in common use for the vineyard, the *stake* and the *trellis*, and these are the only ones which need claim our attention at present. Others are used in Europe, and in a few places here on a small scale, but few of them are adapted to general use, and they are in all respects inferior to those we have named. The trellis, though more costly than stakes, is more durable, and much to be preferred, since it is adapted to all good systems of training. Stakes, on the contrary, are only adapted to peculiar modes of training; they could not be used, for instance, in any of the single or double arm systems, except a short arm renewal system which we shall describe hereafter. A

combination of the stake and trellis, however, is well adapted to some special modes. The system of training ought to be decided on before determining whether to adopt the stake or the trellis. We have no hesitation in stating our decided preference for the trellis for most systems of training.

Let us now see which is the best form of trellis. The post and wire trellis will undoubtedly in the end be found the most durable and economical. Some use narrow wooden slats instead of wire; but these last a comparatively brief time, are always out of repair, and are therefore not to be commended. Others, again, have wooden slats nailed horizontally to the top and bottom of the posts, the slats being connected by upright wires. This form possesses some conveniences in the facilities it affords for tieing up and training the growing shoots; but there are serious objections to it, the principal of which are, its inherent weakness, and the liability of the slats to be broken: the annual repairs necessary on a trellis of this kind make it a dear one. The best form of trellis, on the whole, is upright posts with horizontal wires. The posts may be of cedar, yellow locust, or chestnut, according as these abound in the locality or may be purchased cheapest. The cost of yellow locust, however, is generally too much to admit of its use in the vineyard. Red cedar may in some places be had for the mere cutting and hauling. Chestnut, however, is usually most available, and in all respects makes a good and durable post. The posts need not exceed five inches in diameter; when too large they give the vineyard a clumsy and awkward appearance, and accomplish no good purpose by their large size. Neatness should always be aimed at; it is indicative of a man's tastes and habits of life. The posts should be put at least two feet and a half in the ground; three would be better, the leverage being great when the trellis is covered with vines and acted on by heavy winds. They should be some six or seven feet out of the ground, but not more. If put in the ground in their natural state, the ends will in time rot off; to preserve them, therefore, as long as possible, they should be submitted to some kind of preparation before being set. A variety of applications have been recommended for this purpose. Kyanizing is no doubt one of the best, so far as mere preservation is concerned. Charring the ends will add materially to their durability, if carefully done. A very good plan is to soak the portion to be put in the ground in boiling oil, pitch, or coal tar. Solutions of several kinds of salts are also found to be good, one of the best being sulphate of copper, in the proportion of about one pound of sulphate to one hundred pounds of water. In this case the posts are dried, and the ends placed in the solution, where they are left for several days, when the whole post becomes saturated, and its durability in consequence very greatly increased. Stakes and posts of all kinds to be put in the ground should be treated in some of these modes.

Having prepared the posts, it is next necessary to determine the distance at which they shall be placed. If the vines are planted four or six feet apart in the rows, the posts should be set twelve feet apart; if the vines are planted five feet

apart, the posts should be ten or fifteen feet apart, the object being to get the posts midway between two vines. These distances may be increased, provided a light stake be put between the posts. The faces of the posts, or the sides to receive the wires, should line as accurately as possible. In setting, the end posts should be braced; this is done in various ways, some of them clumsy enough, and quite inefficient. It is usual to sink the brace in the ground on the inside of the posts; and this is a good plan. Whatever mode be adopted, the great point to be secured, strength, must not be lost sight of.

A few words may be added in regard to the wires. No. 10 wire is sufficiently large for general purposes; indeed, a smaller size than this will answer a good purpose. The bottom wire, however, on which arms are to be formed, should be stouter than the upper wires. The wires may be run from twelve to eighteen inches apart, and fastened by a loop to the end posts; to the intermediate posts it may be attached by hooks or screws. It is desirable, and even necessary, to tighten the wires at times, and it is always best to loosen them during the winter, whether the vines are laid down or not; for a vine that sways loosely in the wind never suffers as much during winter as one that is immovably secured. There are numerous devices that may be used for tightening the wires, one of the simplest and cheapest being the screw stiffener now used in the common buck-saw. If the wires are very long, they should be looped to the middle as well as the end posts. The wire used in the vineyard should in all cases be annealed. The toughness of the wire is not impaired by the process, but it is rendered more pliable and durable, and protected from the action of the oxygen in the atmosphere. To protect it from oxydizing, wire is also galvanized; but this is costly, and not as good for the vineyard. Painted wire will last longer in the vineyard than that which is galvanized.

Something may now be said about stakes. These, to enhance their durability, should be treated to one of the preparations recommended for the posts. Stakes, as a general thing, are best made from red cedars, about the size of a stout bean pole. How many will be necessary, as well as the distances at which to place them, will depend upon the system of training adopted. We wish to drop a caution here against placing wooden stakes immediately in contact with the vines, if they are to remain there. The first year, and perhaps the second, it will be necessary to have a stake within two or three inches of the vine, to train the shoot to; but not longer. Wood, in decaying, often generates a fungus which is injurious to the vine; we have known many young vines (and old ones, too) to become almost incurably diseased by this cause alone. If the stakes are well charred, this objection will be done away with.

We have had our attention directed to iron trellises for the vineyard. They would be more durable, and much lighter than wood, but we fear their cost will be fatal to their general introduction. For a small, model vineyard, nothing could be neater or more desirable, unless some objection should be found to exist

in the action of heat and cold on the iron. The objection, so far as winter is concerned, could be got rid of by simply detaching the vines and laying them on the ground, where, covered by the snows of winter, they would be better off than on the trellis. In regard to the cost of an iron trellis, Mr. Davenport, of Stamford, Conn., who is skillful in wire work, thinks it can be put up as cheap as a good wood and wire trellis. We propose to reduce this to an actual test, since, if the cost is no greater, the iron would be much the best investment. Some of our readers might help us to a solution of this question. Our conviction, however, is, that iron posts can not be put up as cheap as wooden ones; but then there are compensating advantages which ought not to be overlooked in summing up the question. In some parts of the country, stone posts of a suitable length can be got at a small cost. Where this is the case, they should be used.

The trellis may be put up when the vineyard is formed, or it may be left till the fall of the second year, or the spring of the third. Where the means are at hand, it would, on some accounts, be best to put up the trellis at the end of the first year. The very small per centage of wear and tear for a couple of years, as it is commonly called, is nothing, compared with the advantage of having the early use of the trellis. What is saved in the labor of resetting stakes, training, etc., will pay this per centage twice over. Our advice, therefore, is, to make the trellis as soon as conveniently may be, but not to defer it beyond the second year; for if the vines have been well and carefully grown, they will at that time need the support of a trellis.

LANDSCAPE ADORNMENT.—NO. XIX. "THE APPROACH."

BY GEO. E. WOODWARD,

Civil Engineer and Architect, No. 29 Broadway, New York.

The most prominent feature in the embellishment of a country estate, next to the mansion, is the approach, and, if of sufficient length, affords an opportunity for a display of engineering and artistic skill that no other specialty in rural improvement can equal. The approach-road is almost the first needed and most useful improvement, and from this fact is generally the soonest built, the least studied, and the least developed. All are willing to spend much time in selecting the true site for the house, and to call the best and most experienced talent to consult with, and yet hastily adopt a manner of approach that in some measure destroys the effect of that which is already good. It is quite as essential that the location of the approach-road be considered as that the house be well situated, or the general arrangement of the grounds convenient. The approach-road, as a general thing, admits of much variety in treatment, as it is not only a roadway

for practical purposes, but one from which the grounds and the house are to be displayed to the best possible advantage, appropriating that which is good, and avoiding that not worthy of notice.

In tracing its course through all the variety which such roads usually embrace, we shall find there is much more skill and taste requisite to make the most of every thing than is generally supposed.

There are very many good sound reasons why the curve line should be adopted in the location of an ornamental road, and the facility given to use all natural resources for its embellishment is a strong one in favor of its use in the approach; but an indiscriminate and injudicious use of the curved line would not be wise. It is possible to distort and misapply almost any thing of beauty, as objects beautiful in themselves may form a hideous combination.

It is hardly necessary to repeat again the old threadbare piece of advice, that no curve should be used without a reason, and if none exist, one must be created; this is pretty well understood by every one, and needs no further remark. With regard to the straight line, there are places where its use is the most preferable, but its general use is not consistent with natural landscape treatment. In approaching the house by the straight avenue, as was customary in the formal style, the view was that of an architectural elevation, showing one front of the house. In the natural style, the house should be approached so that it is viewed perspectively; then, if there is variety in its form, the lights and shadows, and the well-managed accessories, give an artistical effect, and it becomes a picture.

It is not the best management to show all the good things one has at once, but rather to hold out inducements to lead one on in the pursuit of new pleasures, to find a new view, or a pleasing surprise.

The graduation of an approach should be well studied, so that the least quantity of earth is removed and deep cuttings and embankments avoided. It is a skillful matter to find that medium line that lies between all extremes, and still more difficult to please the fancies of all one's friends; yet such a line can generally be found, that in its gradual ascent, economical construction, easy flowing curves, and captivating views, shall explain to one of tasteful appreciation the reason why it occupies the position that it does.

It must be considered that well-adjusted gradients mark a high class of road construction, not necessarily more expensive, but most frequently quite the reverse. Scientific road-construction is as much a matter of economy in the first cost as it is in the annual repair, and there is quite as much effect developed in ascent and descent as there is in direction; and as a needless curve appears badly, so does a needless grade. The surface should be hard and smooth, and the road constructed of the best materials that can be had, and there should be in all that appertains to it a very decided difference from the public highway.

The width of a road must be governed to some extent by its length, and by the manner in which it is proposed to be kept. A wide road in fine order expresses

an air of dignity and grandeur, yet, if too short, disappoints, because of the attempt to show what does not exist. As a general rule, the minimum width should be ten feet on approaches of moderate length, and increase in proportion to distance to 12, 14, 16, 18, or 20 feet wide. The chances of passing carriages on a road increase with its length, yet on one of 300 to 500 feet long it is rare, except on unusual occasions, for carriages to meet. A wide road implies frequent use, and therefore neglect would destroy its impressions; neatness and fine keeping are essential to its importance and effect.

As a general rule, there should be no deviation from the approach road before reaching the house; to a stranger there should be no doubt raised as to which should be the proper road for him to take; and whenever it becomes necessary to branch off for any purpose whatever, it ought to be at points from which the house is in sight, and the branch roads take such a direction at first as to lead one to suppose that the house could not be reached by them; they should also be inferior in width and character, and, as far as possible, so managed as not to be mistaken for the main road. It may be a question difficult to decide, whether it is proper to see the coach-house, or other outbuildings, from the approach; although we would prefer to see no inferior buildings prior to seeing the house; yet, if they must be so treated, they ought to come in sight together, and the coach-house, or other building, be beautiful in its architectural appearance; and let its architecture be truthful, that it be not mistaken for any thing but what it really is; then it becomes an object of admiration, and soon left for the grander proportions of the mansion, without a thought that it would be more proper if occupying a less prominent position. Considerable liberty may be taken with the location of an approach road, until that part of it is reached from which the house is visible; its general direction should then be towards the house, and not to pass it and return. A leading principle governing the location of an approach road is, that it is a road leading from the highway to the house, and that its course should be nearly direct, its entire alignment, graduation, construction, embellishment, &c., to be made with a view of developing a high order of beauty, usefulness, and effect, all of which is attainable at even less expense than in those locations which have little or no meaning, and which undervalue the true character of the landscape.

TSCHUODY'S HERBACEOUS GRAFTING (GREFFE HERBACEE) AGAIN.

BY HORTICOLA.

Many readers of the Horticulturist will be very thankful to Mr. Charles Moré for having called their attention to a mode of grafting so easy to perform,

and so certain of success. Having had an opportunity of trying it, I hope to be pardoned for introducing the same subject again.

Two years ago, in the month of June, I saw a friend of mine cutting down a grape vine an inch and a half thick, in order to graft it. I expressed my fear of the probable loss of so strong and beautiful a plant, recommending at the same time the grafting of one of its green shoots, the possibility of which my friend seemed to doubt. Although I had had no experience in herbaceous grafting, yet, more bold than considerate, I promised to show him that it could be done. What I knew of it was hardly more than I had picked up accidentally from hearsay. Still I undertook, immediately on my return home, to graft a scion of a tomato on a shoot of a potato vine growing in my garden. I cut about one third of the potato shoot off, just above a leaf, taking care not to injure the bud at its base. The tomato scion had two buds. The potato shoot was split about an inch long, the lower end of the scion cut in the form of a wedge, inserted, and tied with a piece of matting without the application of any wax. The scion, being shielded from the sun, was every day sprinkled with a little water, and took readily. In the fall the tomato was loaded with ripe and unripe fruit; it had grown to an enormous size. Not having removed any of the shoots of the potato vine, it yielded as many tubers as a vigorous potato plant will generally produce. The experiment excited more admiration than it deserved, from the fact that herbaceous grafting was unknown here. My friend was convinced, but failed in every attempt at grafting a green shoot of a grape vine into a green shoot of another, though undertaken in a vinery.

Last spring I took home with me a lateral of the Golden Hamburgh grape, which had just been broken off. This was in the middle of June. I cut it into two scions of one eye each, and inserted them into the young shoots of Isabellas which had sprung up, the main stems having been winter killed, precisely in the same way pursued in grafting the tomato on the potato; that is, I cut off the shoot of the Isabella one third of its length from the top, etc. Still being very anxious to accomplish my object, I covered the plant thus grafted with a large bell-glass, shading it carefully till the incipient growth of the scion indicated that the union had taken place. The fifth day after the operation I removed the eye at the base of the first (top) leaf. Five days later I cut the discs of every leaf of the stock, so that nothing but the middle rib remained, removing at the same time their eyes also. Ten days after I repeated this latter operation, at which time I cut the leaf of the scion in the same manner in which I had cut the leaves of the stock ten days previous. A perfect union was effected in less than a month. It may be important to state here, that I left as long a piece of the shoot of the scion above its only bud as was possible. This piece was about an inch long; the cut for the wedge commenced about a quarter of an inch below the eye. To be accurate in every particular, I must also mention that I used instead of matting elastic woollen yarn, not too much twisted, for tying.

The laterals of the grafts were stopped at one leaf each time, as usual, to ob-

tain a single strong shoot. One of them had attained the height of four feet towards the close of August, when it was stopped to ripen its wood. The other, growing in a shady place, did not ripen much of its wood, so that I shall lose it during the winter, while I am confident that the first one will survive it, notwithstanding the impossibility of potting it, as intended, for reasons too irrelevant to be explained here.

Noisette, in his justly celebrated book on gardening, describes two modes of performing herbaceous grafting, the one for woody plants and trees, the other for herbaceous plants, such as the cucumber and the like. The latter is exactly identical with the method I pursued in grafting the tomato on the potato; the former prescribes the gradual removing of the eyes and the discs of the leaves, as practiced by me in grafting the grape vine; for I proceeded as he advises it. He cuts also the scion as I did, but his way of splitting the stock is entirely different. His way is the following: Towards the end of May the stock is cut below the third, fourth, or fifth leaf, counting them from the top downwards, so that a little stump is left (an inch or so long) above the next leaf and eye. By the *eye* is meant that one which is prominent; actually there are *three* of them, two hardly visible without a magnifier. The cut or split of the stock ought to be slanting, commencing about a quarter of an inch *above* the petiole of the leaf, and descending between the prominent and either of the two small eyes into the middle of the stock a little more than a quarter of an inch below. Consequently the whole length of the cut or split will be not quite three quarters of an inch long. Of course this depends wholly on circumstances.

That it is not necessary to be so particular in regard to this point, the success of my way of proceeding shows clearly. The stump above the only eye of the scion should be of the same length as that of the stock; and, if practicable, the plant should be covered with a bell-glass till it begins to grow.

In grafting evergreens, some care is required in the removing of the leaves. This article, however, is already so long, that it would be injudicious to make the slightest addition. In conclusion, I may perhaps be permitted to say, that Azaleas can also be easily grafted in the fork of two small diverging twigs, even if the scion should not be thicker than a knitting needle. This, I know very well, is not new, but it is eminently practical.

[We are under deep obligations to Horticola for having broken his long silence, and treating us to a subject so interesting to our readers. We will say here, that Horticola is not only a distinguished scholar, but a devoted and enthusiastic amateur and experimenter; our readers may expect to hear from him often. The present article will commend itself to our readers generally; we can imagine with what avidity it will be read by our friend El Medico. We have more in store for him, and others as devoted as he is. In making the slit in herbaceous grafting, the reader must understand that the eye in connection with it on the stock

must not be destroyed; this is of importance, especially in the grape vine. On this point Horticola has anticipated one of our Grape articles. The Grape vine may and should be grafted in this way earlier than mentioned by Horticola, and the ripening of the wood thereby insured. The reader will observe that Horticola performed the operation in June simply because he at that time came into possession of a valuable scion; he does not recommend grafting so late, though his case shows that it can be done thus late, and ripe wood secured. When a bell glass is not at hand, a good substitute may be made of oiled paper. Probably a good many of our readers will amuse themselves next summer by taking a crop of Potatoes and Tomatoes from one and the same plant: we can promise them that they will find the experiment a very interesting one.—Ed.]

THE FIG.—No. II.

BY R. S. S., SUNNYSIDE, N. J.

In point of historical interest, there is no fruit which claims higher regard than the Fig. It is of very great antiquity; a pomological noble, not a parvenue of recent birth and upstart pretensions. Its native habitat is Asia, where it is indigenous throughout the warm countries: perhaps its origin was in that garden which the curiosity of our first mother forfeited to her race. From Asia it was transplanted into Italy; and, as it is said, naturalized in France by the Greek colony which founded Marseilles, he ancient *Μασσαλία*, a celebrated colony of the Phocæans. This fruit seems to have been most highly prized by the Greeks, for we find that at Athens there was a law against the exportation of Figs. An informer against those who violated this law was termed *Συκοφάντης*, a detector of Figs; and hence our English word sycophant.

McIntosh thinks the Fig was introduced into England by the Romans almost coeval with the Christian era; but that it was lost until again introduced in 1525, when "Cardinal Pole brought from Italy those identical Fig-trees which still exist in the archbishopric gardens at Lambeth Palace; and (he adds) Dr. Pocock, the Oriental traveler, first brought the Fig to Oxford, and planted a tree in 1648 in Oxford College garden, of which tree the following anecdote is told: Dr. Kennicott, the celebrated Hebrew scholar and compiler of the Polyglot Bible, was passionately fond of this fruit, and seeing a very fine Fig on this tree that he wanted to preserve, wrote on a label, 'Dr. Kennicott's Fig,' which he tied to the fruit. An Oxonian wag, who had observed the transaction, watched the fruit daily, and when ripe gathered it, and exchanged the label for one thus worded: 'A Fig for Dr. Kennicott.'"

At the present day the culture of the Fig is general throughout the southern part of Europe, and in southern France and Algeria. Its introduction into this

country is of quite recent date—at about the commencement of the nineteenth century.

Thus much is said of the Fig, to show the claim it has upon our attention, simply on the score of historical interest. Now to speak of it pomologically.

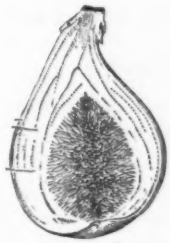
We know not how many varieties were known to the ancients. The probability is, that, from the high esteem in which the fruit was held, and the attention given to its culture, many more and finer varieties were known to them than to us. Be this as it may, there are yet a large number of varieties known at the present day. Among these Du Breuil enumerates "as only among the best which are cultivated in Provence," twenty-two of the *White*, nineteen *Colored*, and seven of the *Black*.

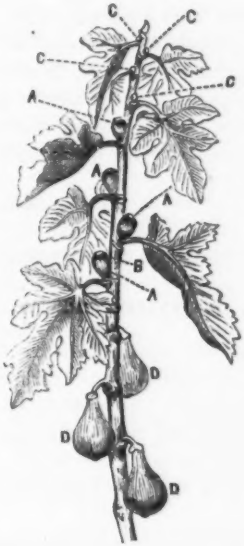
The most favorite of the many varieties is that known as the "Ischia," of which there are three kinds, the White, Brown, and Black.

The Propagation is a very easy matter. It is done by the Seed, Cuttings, Layers, Suckers, Roots, and Graftings. The best, most reliable, and earliest to insure fruit, is the process of Layering. The plant, if kept in a stool shape, which is for this latitude undoubtedly the best, will yield annually a number of layers. These, detached in the fall at the time of giving the parent plant its winter protection, and buried until spring, and then set out, are very sure, and come early into fruit.

The Soil. As to this, we would say, choose neither a wet nor a dry locality; rather what might be termed a moist soil. It is a French saying, that "the Fig likes to have its foot in the water and its head in the sun." A light loam seems to be preferable, and especially a soil replete with calcareous elements. In *planting* and *training*, the rules followed in Fig-growing countries are not altogether applicable here, or at least in this latitude. In Europe, plantations are made. In England, walls are used; but with us the better plan is to grow the trees separately, and apart; not in rows, but scattered, and, if practicable, between other fruit trees. In this way disease, or an enemy attacking one plant, will not be communicated to the others. The most practicable form in which to grow the tree is in the shape of stools, taking great care not to allow them to become too thick or crowded. In this way it will be easier to give them their *winter protection.* Of all the fruit-trees, none require protection against winter frosts more than the Fig. If left unprotected in cold climates, it is sure to be killed down to the ground. Hence it becomes a very important question, how to afford this protection? It is a necessary evil connected with growing the Fig, and in any latitude where the tree can withstand the winter it is far better off without any protection. The uncovering the tree in the spring is attended very frequently by serious evils, in sudden checks, resulting in the loss of the first crop, and considerable growth of wood. Various devices have been resorted to for protection, but in this latitude the safest and easiest is to cover the tree with earth. This should be done late in the fall, before the ground freezes, and while it is yet fria-

ble and free from excess of moisture. The tree should be freed from all dead and unnecessary wood, the superfluous layers taken off, and the shoots gathered together and bound into a bundle with ropes of *straw;* (this is supposing the stool form;) then dig around the roots, and throw the tree over, so that the whole mass shall lay upon the ground; then pile on the earth and mound over to a sufficient depth to effectually exclude the frost; taking particular pains to finish the mounds so that they will not break open during the winter, and that the rains and snow may readily drain away from their bases. In removing this covering in the spring, corresponding care must be exercised not to wound the canes with the spade, and the time for uncovering should be delayed as directed in Part No. I., in the November number.





We have spoken of the Fig solely as an open air fruit, and therefore do not intend here to enter into the subject of forcing, or the acceleration of ripening by artificial means.

We have practiced, in the fall crop, the anointing of the eyes of the fruit with olive oil, which, despite all the sneers of the overwise, we have found to facilitate maturation in a very remarkable manner; the why and the wherefore we leave to more knowing ones to explain.

We are advocating the cause of a pet fruit, and if the attention of amateurs shall in any wise be drawn to the culture of the Fig by reason of any thing these

unpretending papers have put forth, their aim and object will then have been literally fulfilled.

Explanation of the Drawings.—They represent, one side, the section of a Fig, showing the flower within the fruit; on the other side, a branch of a Fig-tree, showing the summer fruit at D, the autumnal or second crop at A, B, and the rudimentary buds which appear in the summer, whose development is arrested by the winter, remain stationary until spring, and are then developed into the summer or first fruit. The portion of the branch bearing the summer fruit, D, shows how the leaves have disappeared to give full chance for the fruit to mature.

[Well, we were not wrong in estimating you above many Figs. Your historical allusions are very interesting; but there is one very interesting circumstance in its history to which you have not alluded: we refer to the fact, that at a very early period of the history of the world Fig-leaves were found very useful in making aprons.—In regard to winter protection, where the plants are grown in stools, the branches may be gathered into convenient bundles, bent down, and covered, without disturbing the roots, if this be preferred.—Ed.]

SUCCESSFUL CULTIVATION OF PLUMS FOR MARKET.

BY JAMES M. BARRETT, CANTERBURY, N. Y.

So much has been said and written of late upon the Grape question, that I begin to fear we may forget that other fruits can be successfully raised. I therefore propose to give you my experience in raising Plums, in which I have made a profitable experiment, willing that my fellow readers of the Horticulturist may go and do likewise, if they believe the Yankee maxim, that some things may be done as well as others, and that one man can do what another has done, *if he tries.*

In 1856, I set out with care what remained of seven or eight hundred Plum-trees, which had been stuck out by contract two years before, and up to that time had refused to thrive. This transplanting revived them, and from that period I date the beginning of my experiment, which, including the present season, makes six years that they have been under treatment. The ground between the Plum-trees has been regularly plowed and cultivated for the Raspberry crop, the product of which has paid all expenses, including $50 per year ground-rent, for two acres and a quarter, and a profit besides. In 1859, I spread under each tree half a peck of common salt.

The black knot upon these Plum-trees has appeared regularly every year, and has been cut out clean to the healthy wood in the month of June, say within a

fortnight after its first appearance, and while the excrescence was still soft. It is then easily removed without injury to the tree, the wound generally healing over the same season. For the last three years this disease has decreased yearly. The past season I removed the whole from 640 trees in less than half a day. In 1859 these trees began to bear fruit, yielding twenty bushels, which was sold for fifty-five dollars, after paying expenses. In 1860, the crop was nine bushels and one peck, which brought three dollars a bushel. In 1861, I gathered and marketed seventy-two bushels, for which I received five dollars and twenty cents a bushel, after paying expenses. The total receipts for the three years amount to four hundred and forty-eight dollars and seventy-five cents, after paying all expenses, and amounts to about three times the original outlay, including cost of trees, labor of setting, and transplanting. I know of no business which pays a better profit upon the investment. Only about one-half of my trees have yet borne fruit. Many of them produced from six to twenty Plums the past season. Of course, the production may be expected to increase for many years.

The variety cultivated by me is the free-stone frost Plum, which is most prolific. The cling-stone is much the finest variety, holds good on the tree two or three weeks later, and brings a higher price in market.

The secret of my success may be summed up as follows:

1st. By selecting varieties that are but little troubled by curculio, and that are marketed without damage to the fruit; these, being used for preserves, are gathered before they become soft and mellow enough to eat: consequently, they are not injured by transportation to market, and are sure to bring a good price.

2d. By careful planting in ground previously prepared and mellowed, and kept so by yearly working.

3d. By the use of salt as a manure.

4th. By an unsparing use of the knife upon the black knot in the month of June of each year, instead of waiting until fall or the next spring, or perhaps neglecting it altogether.

In former years the Plum crop of this country was a source of profit to almost every farmer, but the curculio has attacked and destroyed the finer varieties of fruit, and the black knot made such havoc among the blue Plum-trees, as to discourage its culture. May we not hope to see this fruit again generally cultivated for market purposes?

[There is no reason why we should not, if we take the necessary trouble, which need not exceed that usually bestowed upon the Raspberry in your own neighborhood. If the time and labor devoted to covering the Raspberry were bestowed upon the Plum, in jarring the trees, &c., as practiced by Ellwanger & Barry and others, the Plum would yield a fair average all over the country. Without some such devotion as this, it is useless to attempt growing few but the poorest kinds. Prince's Imperial Gage seems to be one of the few good Plums

not so much attacked as others. Cutting out the black knot, as you suggest, is very necessary. The application of salt, if not carried too far, is good, since it also helps to kill the grub; but we have known its injudicious application to be entirely destructive of the tree: the recommendation of such applications should always be accompanied by a caution. We are obliged to you for calling attention to this subject, and giving us the results of your practice. We shall be glad to hear from you again.—Ed.]

VALUE OF NATIVE GRAPES.

BY DR. J. S. HOUGHTON, PHILADELPHIA.

My remarks upon the value of native Grapes, at a meeting of the Brooklyn Horticultural Society, have been made the subject of comments in various journals, which may seem to call upon me for some reply. If the reports of my remarks had been fair, or correct, I would permit the case to rest upon the argument as it was offered, being well assured that the positions assumed were sound and just. But the chief reports (except the first in the Horticulturist) were evidently prepared with a deliberate design to misrepresent and ridicule me; and hence I feel inclined to offer a brief statement of what I did say. Stripping the matter of many words, the following is an abstract of the remarks in question:

Being called upon to give some information respecting the state of native Grape culture at Philadelphia, I stated that there had been but little success here in this branch of pomology on any thing like an extended scale, either in respect to the gratification to be obtained from eating Grapes, or in pecuniary profit. I told the audience that there had been some native Grapes produced in city yards, and on arbors and trellises in the outskirts of the city, of tolerably good quality; but no encouraging success in vineyard culture, either for table use or wine.

I alluded to the fact that there had been a great excitement produced in the public mind by the exaggerated statements of the dealers in Grape vines, who had asserted that it would pay to invest $4,000 in the preparation and planting of an acre of vineyard for market purposes; and that from $500 to $1,500 per annum could be produced from an acre.

In reply to these assertions, I stated that, so far as Philadelphia was concerned, there was not now, and never had been, an acre of native Grapes in the vicinity of the city which had proved profitable to the grower. I gave the details of the case of John Farnum, Esq., of Bustleton, near Philadelphia, who, seven years ago, planted eight or ten acres of Isabella and Catawba vines, purchased of a famous New York vineyardist, and managed by one of his vine dressers, which had proved an utter failure, making a loss of $10,000 for the owner, to say nothing of time and annoyance. This vineyard, I am assured by the gar-

dener on the place, never paid tending, and has been nearly all dug up as worthless. Mr. Farnum is a gentleman of intelligence, and has a foreign Grape house about two hundred feet long, which annually produces from six hundred to one thousand pounds or more of Black Hamburghs, and other kinds, equal, in point of size, color, and flavor, to any grapes sold in Philadelphia. The failure of the natives, therefore, in this case, was not owing to want of skill in Grape culture.

I then stated, what I still believe, that the sum required to prepare, plant, and trellis an acre of native vines, and tend them till they come into bearing, would build a lean-to vinery one hundred feet long, which would produce a crop of fruit more speedily and certainly, and of far greater value than the crop of an acre of natives, either for market purposes or for table use. Seven hundred dollars will build such a house, and I leave the reader (as I did the hearer) to estimate the cost of an acre of vineyard, but I am well satisfied that it will cost more than seven hundred dollars, if done upon the plan most commonly advised.

I instanced the case of my own vineyard, of nearly an acre, now three summers planted, which has not produced a pound of native Grapes, the early shoots being all killed by the frost last May, while my Grape house, which cost no more money, in fifteen months after planting, produced three or four hundred pounds of delicious Frontignans, Muscats, and Hamburghs, giving us almost daily a dessert of the finest Grapes for upwards of three months, (from July till October,) and worth, in good times, from fifty to seventy-five cents per pound. This house, I expect, next year, will produce six or eight hundred pounds of Grapes—probably more.

I stated the general objections to the native Grapes as follows:

1st. We have no native Grapes, except the Delaware, which can at all compare with the foreign kinds, and the Delaware is too small to give a good weight of crop. The Isabella is generally a very poor, watery Grape; the Catawba, though good when ripe, does not generally mature here; the Diana is very good, but ripens imperfectly; the Concord is a very coarse, common Grape; and the rest have no merits which really render them worthy of extended vineyard culture.

2d. The crop of native Grapes, at Philadelphia, is very *uncertain*, on account of frosts killing the young shoots and destroying the fruit, and other causes.

The buds and foliage are destroyed by vine beetles.

The foliage and fruit are often ruined by mildew.

The fruit is destroyed by "rot."

3d. The crop, when obtained, is of small value for market purposes, or other use, and unsalable at any paying price. The usual price of common native Grapes raised in the immediate vicinity of Philadelphia, is from six to eight and ten cents per pound at retail. The best quality may occasionally bring twelve and fifteen cents. The best Catawbas sold here come from Ohio; and selected fruit, in the regular season, sells at fifteen and eighteen cents per pound. The vineyard grower

can not, in many instances, act as retailer, and hence the price (by wholesale) must be much below the above figures, as the crop is perishable and the market dull. The fruit dealers all declare that there is no money to be made by selling native Grapes, because the margin of profit is small, and the sales dull and uncertain. The truth is, people don't want the native Grapes, in any large quantities, at any price. A housekeeper who thinks nothing of buying twenty-five to a hundred quarts of Strawberries, Raspberries, and Blackberries in a season, for eating fresh and for preserving, would not purchase five pounds of common native Grapes at six cents a pound.

4th. There is much talk of using native Grapes for making wine. The fact is, that the Isabella and other Grapes which will ripen fairly, will not make wine (true wine) at all, and the common domestic wine, from any Grape, is wretched stuff. Good wine can not be made in this careless and unskillful way.

5th. The common, badly cultivated, ill-ripened native Grapes, are not only unpleasant to the taste, but positively indigestible and dangerous to delicate children and persons of feeble digestion. Sudden and violent deaths have been produced in the vineyards at Cincinnati from eating rather freely of the Catawba. The pulp of the native Grape is very indigestible, and the seeds often prove very irritating to the intestines.

One gentleman stated, in reply to me, at the meeting referred to, that he had eaten five pounds of native Grapes per day during the height of the season, in addition to his other food, I suppose. Now, the rations of a soldier, under heavy marching, consist of only two pounds and a half of solid food in twenty-four hours; hence, I think we must set down the case of this gentleman as one of depraved alimentiveness. I am quite sure that five pounds of native Grapes, such as are generally produced and sold at Philadelphia, would kill any ordinary human being, if eaten in one day.

Thus much for the general tenor of my remarks at the Brooklyn Horticultural Society. My main point was, that any person who desired good grapes, and could afford to plant an acre of vineyard, had better put up a grape-house, and grow the foreign kinds under glass. I said that the vineyard culture of native grapes had not been successful or profitable at Philadelphia. I think so still. I have made diligent inquiries of the best informed persons, and have yet to hear of a successful vineyard which has been planted within five or six years. Ten years, or more, ago, when native grapes retailed at twenty-five cents per pound in our market, there was some money made by raising native grapes at Reading; but not much lately.

The nonsense put forth by the writer, under the signature of "Brooklyn," in the Horticulturist, is almost unworthy of a reply. I did not speak as a rich man, who could afford to have costly grape-houses, nor with contempt of the "simple pleasures of the poor." I was only comparing the relative cost and product of extended grape-culture in the vineyard and under glass. So all his sarcasms are as pointless as a bad joke, with the laugh taken out.

The writer in the New York *Evening Post* must not misstate me too boldly. It would take half a number of the HORTICULTURIST to answer him in detail. Suffice it to say, that I have seen acres of native grapes on a place cultivated by that writer, in September, not very far from New York, some two years ago, in a partially ripe condition, (as ripe as they ever would be,) and when I inquired why he did not pick them, and sell them, he replied, *it would not pay him to pick them;* he was too busy with other things to pick and market them, or have them picked. This was no doubt true; if they grew wild, it would not pay a man in decent business to hire help to pick and market common native grapes, at common prices. The writer referred to should not misrepresent me, and then attempt to disgrace me for what I have not said. Nor should he attempt to put down my method of culture by unfair statements. He is too easily known by his style. One who never speaks or writes on the grape without using the phrase "vinous refreshment," which nobody else does use, can not expect to employ his usual style in anonymous attacks upon any member of the Horticultural fraternity, without being discovered. Fair play is of as much value as the Delaware grape.

In conclusion, I wish to be understood in this matter. I am not opposed to native grape culture. I cultivate these grapes extensively, and as successfully as others do. But I do not think them generally profitable, or very useful, or very gratifying to the taste; and compared with foreign grapes, raised under glass, they are unworthy of much labor or expense. A few native vines, in a sheltered situation, or on an arbor, may be found useful on any country place; and persons who can not afford to have a vinery of any size, or who could not manage one, may be much gratified with a few vines of natives. But those who for any purpose grow the natives extensively, near Philadelphia, I think are doomed to disappointment in the result. I think the Delaware a fine grape, quite satisfactory to the taste; but it will scarcely produce a profitable return, in vineyard culture, until vines are to be obtained of better quality, and cheaper than those now offered. I confess myself a victim of the native grape mania; but it is not on account of my lack of skill in culture, nor in consequence of the system of culture pursued, as the writer in the *Post* would lead the reader to suppose; for the same skill and the same system prove eminently successful in the more difficult culture of the hot-house.

Now let us have all the facts and statistics on the *profit* of native grape culture in vineyards of one acre, or more, north of Maryland and east of Ohio.

Dr. Grant is reported in the December number of the HORTICULTURIST as saying to the Brooklyn Society, that "*the vineyard affords a more remunerative pecuniary return, than can, by any other branch of culture, be drawn from the bosom of our blessed mother earth.*" All I have to say is, that at Philadelphia, "our blessed mother" don't treat us in that way. Here "the fathers have eaten sour [native] grapes, and the children's teeth are set on edge." As to the pecuniary profit of vineyard culture, we are in the condition of the famous Lord Dundreary, when a cruel joke is made at his expense, *we* "*don't see it.*"

[The length of the Doctor's article precludes us from any extended remarks; and as both he and the reader are familiar with our opinion on the subject, they will not be missed at present. The Doctor's remarks and our reply are fairly though very briefly given in the October number, in the proceedings of the Brooklyn Horticultural Society. We can not conceive of any satisfactory reason why native grapes can not be well and profitably grown around Philadelphia; and if this controversy shall develop any such reason, we shall not regret that it has taken place, for it would certainly develop a very remarkable fact in horticulture. In regard to eating five pounds of grapes a day, (*good* ones of course are understood,) nearly twice that weight per day is common in the "grape cures" of Europe; a friend recently from Italy assured us that he ate over eight with great benefit. We will undertake to grow fat on good grapes, native or foreign. We are now ready for the other side. Eat freely, but speak moderately.—Ed.]

ROGERS'S HYBRID GRAPES.

BY VINITOR, BOSTON, MASS.

Mr. Editor,—Having read in the Horticulturist, of 1858, an account of the Hybridization of the Grape, by Mr. Edward S. Rogers, of Salem, and recently seen some fine specimens of the fruit on exhibition here, I was induced to make a trip down there, for the purpose of examining the vines, and would like especially to give you a brief notice of one of the best, No. 15, growing in the garden of Mr. William H. Harrington. He informed me it was three years and a quarter old from the bud; the second year making a strong growth, showing two or three small bunches of fruit.

The past season has given ample evidence of its quality and comparative merits with many of the new and old kinds of hardy grapes. It has been the object of much interest and attention, and visited frequently by many gardeners and horticulturists in the vicinity, such as Col. Wilder, J. M. Ives, Esq., and others well known about the country.

Rising amid the Dianas, Concords, Isabellas, Hartford Prolifics, Rebeccas, and Delawares, near by, it seemed unrivalled in vigorous, golden, short-jointed wood, and large, luxuriant foliage, profusely laden with bunches (over a bushel) of amber-colored fruit, equally remarkable for size and beauty. The flavor is aromatic, resembling, though higher, somewhat, the Diana, Frontignans, or Catawba. It began to ripen the 20th of September, before the Concords or Dianas alongside; the vine showing no mildew, and the berries, every one, adhering firmly to the branch after gathering, unlike many valuable sorts.

The opinion of all is, that it is first rate; and of many judges, the best out-door grape yet raised, if continuing to do as well. Mr. Harrington has made way, by

ROGERS'S HYBRID, No. 15.

taking up many Isabellas, for more of Mr. Rogers's new varieties of Hybrids; and I will conclude by saying, that, from among his thirty kinds of new seedling crosses of the foreign with some of his best of the original forty-five, (four of which are in bearing,) we may soon look for something more valuable.

By these experiments, Mr. Rogers seems to have made assurance of the art of hybridization of the grape doubly sure, and reduced it to a system, with exactness, precision, and certainty, entitling him to the honor of first realizing on the vine the beautiful though distant vision of Lord Bacon, over two centuries ago:

"The compounding or mixture of plants is not found out, which, if it were, is more at command than that of living creatures; wherefore it were one of *the most notable discoveries* touching plants, *to find it out;* for so you may have great varieties of fruits and flowers *yet unknown.*"

[We have heard a good deal of these hybrid grapes of Mr. Rogers, but have seen only one, and but little of that, so that we are unable to give any opinion of our own. The above, however, is from a gentleman who has seen them often. We should be very glad if specimens of these grapes were sent to us next season. We feel a peculiar interest in all new grapes, and are always glad of an opportunity to make a record of them, provided they have merit. Col. Wilder has pronounced these grapes to be true hybrids, so that Mr. Rogers enjoys with Mr. Allen the honor of having successfully crossed the foreign with the native grape. Mr. Wilder describes No. 15 as follows: "This is a new hardy grape, raised by impregnation of a native sort with the Black Hamburgh. Color, deep amber; clusters large, often with shoulders; berries large; flesh tender, of a rich aromatic flavor, resembling Diana; vigorous; very productive; ripening earlier than that variety." An engraving of No. 15 is given above.—Ed.]

HOW TO BUILD YOUR COUNTRY HOUSES.

(*See half title in front.*)

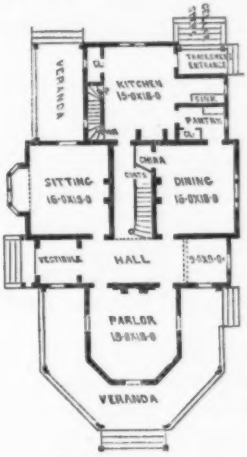
BY CHARLES DUGGIN, ARCHITECT, 532 BROADWAY, N. Y.

The house I have selected to illustrate the present number, was erected in 1860, at New Brighton, Staten Island, and forms one of a group of seven, the property of W. S. Pendleton, Esq. Being situated on high ground, it commands extended views over New Jersey, New York, and Long Island. This house being erected for renting, the plan was arranged with particular reference thereto, and as such is offered as a residence suitable for most families.

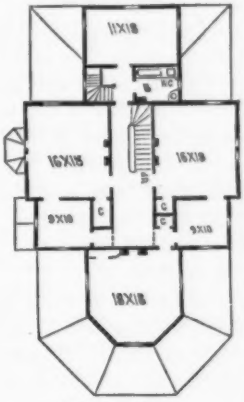
It is planned on an economical scale, and at the same time is liberal in its arrangement. All the rooms are of moderate but comfortable size.

The arrangement.—Passing through a vestibule, the hall is entered, from which doors open into each room; by this means a free circulation of air through the

various apartments is secured. It will be observed that the hall is symmetrically arranged, the doors to the several apartments being placed directly opposite each other; this gives the hall a very handsome appearance, and places the different rooms in easy communication with each other. That portion marked off at the end of the hall, if deemed best, might be partitioned up, and a door placed in the



Principal Floor.



Chamber Floor.

centre. This would form a comfortable little library or study; or, if preferred, be left as at present, with simply an arch thrown across the hall. To this arch could be suspended curtains, which, if hung in festoons and gathered up gracefully, would tend much to enhance the appearance of the hall. With the arch and curtains this space could still be appropriated as a library or snuggery, to be inclosed by the drapery when in use. A French casement or sash door is provided from the vestibule and from the end of the hall, for easy access to the veranda, thus avoiding the necessity of passing through the parlor for that purpose.

The principal stairs are placed in a side hall; under these stairs a closet is provided for hats and coats. This side hall also answers the purpose as passage to the kitchen.

The kitchen is of ample dimensions, and is fitted up with every convenience, such as range, boiler, dresser, closet, etc. A sink-room is also provided in connection with the kitchen, in which is placed the pump to supply the tank in the third story. The communication to the dining-room from the kitchen is through a pantry, the doors of which are so arranged as to prevent, as far as possible, the fumes of the kitchen gaining access to the dining-room.

The dining-room is a very pleasant apartment, with a convenient space on either side for a sideboard. A china closet is also provided to this room.

The wash-room is located in the basement, underneath the kitchen. The space beneath the pantry, sink-room, and kitchen porch is walled up, and paved and connected with the outside by the cellar steps. The remainder of the basement is devoted to the furnace, coal, and store rooms. Should more room be required on the first floor, the kitchen could be removed to the basement, taking the place of the wash-room, and a dumb waiter provided in the pantry. This would allow of the present kitchen being used as a dining-room, and the present dining-room for any purpose required.

With regard to the arrangement of the second story, little need be said, as the plan is self-explanatory. The small rooms are made to communicate with the chambers, so that they can be used as dressing-rooms if required. The front small room might be increased four feet in length by taking away the closets; in that case a closet to the chamber should be provided alongside of the fireplace.

Three chambers are provided in the third story, with closets attached. That portion of the third story over the parlor is left unfinished, and makes a convenient place for storing away trunks and other articles. There is also a small room in the tower, but the stairs to the upper story of the tower interfere somewhat with the available space.

The height of the basement is seven feet, the first story eleven feet, the second story nine feet six inches, and the third story eight feet in the highest part.

Construction and Finish.—The foundation or basement walls are built of stone and twenty inches thick. The outer surface where coming against the earth is plastered up with cement, so as to keep out the dampness. All the walls above the basement are constructed of wood. The frame is filled in with brick, and covered on the outside with narrow rebated clapboarding, the window casings being cut out of plank one inch and a half thick. The roof is covered with ornamental cedar shingles. All the workmanship and materials are of the best description. The rooms on the first and second stories have appropriate moulded cornices and centre-pieces. The spaces between the roof rafters are filled in with an additional coat of lathing and plastering. This is but a trifling additional expense, and keeps the attic rooms warmer in winter and cooler in summer.

From the back of the kitchen range a hot air flue is provided, connecting with the bath-room over. This answers the double purpose of heating the bath-room, and at the same time prevents the water in the pipes from freezing.

From the upper story of the tower a very extended view is obtained of the surrounding country. To make this room even more interesting, the sash is glazed with stained glass of different shades and grades of color. Looking through these various tints, it has a singularly interesting effect. It also has the recommendation of subduing the glare of light that is generally an objection to these tower rooms.

Cost.—The carpenter and mason work may be put down at $6,500. The mason work, however, was the only portion done by contract. This amounted to

$1,600, which included the drains and cess-pools. An estimate was obtained ($4,900) on the carpenter's work, for the purpose of contracting it out. It was, however, decided to do this portion by day's work. In addition to the above, should be added the cost of the furnace, mantels, grates, and plumbing.

THE STRAWBERRIES OF THE WORLD, AND THEIR NORMAL SCIENTIFIC CHARACTER.

BY WILLIAM R. PRINCE, FLUSHING, N. Y.

I HAVE long been desirous to express my views, and the facts in regard to the Strawberry Question, in order to set at rest the erroneous opinions so generally existing, and you may judge somewhat of my feelings when witnessing, for the last twenty years, the flounderings and misconceptions of Dr. Lindley and others who have deemed themselves "exclusively scientific" on the Strawberry question of sexuality, as well as on the Grape question, and more recently on the Currant question. The extreme prejudices of Dr. L. against every thing American, you and I perfectly understand, and can therefore estimate at their actual value.

On the present occasion I shall confine myself to the first question—the Strawberry. In response, some years since, to Mr. Longworth, Dr. Lindley replied, that they knew of nothing but hermaphrodites in England, and in a recent article in the Gardener's Chronicle he has reiterated the assertion by stating that, "with the exception of the Hautbois variety, (species?) if any one has ever yet discovered a sterile Strawberry in England, (meaning any plant not hermaphrodite,) he has yet to hear of it."

Herein, as I shall proceed to show, the Doctor, while professing to be "exclusively scientific," has ignored all science. He has ridiculed the idea of sexuality in the Strawberry, which has been repeatedly asserted by Americans as competent as himself to form a correct judgment, simply because his personal knowledge and investigations have been so circumscribed as to embrace only such special fancy varieties as are in vogue in England, while he betrays an utter ignorance of the sexual characters of many of the varieties grown in the London Horticultural Society's Garden, and announced in their catalogues, and this in face of the fact that he was for a long period the Secretary of that Society, occupying thus a position which opened to him every source of information.

And here let me say, that Dr. L. uses the word "sterile" very incorrectly, its true meaning being incapacity to produce progeny. In point of fact, therefore, there is no such thing as a "sterile" Strawberry either in Europe or America. There are males and females, both unproductive when separated, (like males and females of animals,) but each necessary to the other in the course of reproduction, and devoid of all sterility.

To return. In the first edition of the London Horticultural Society's Catalogue,

published in 1826, there are *seven pistillate or female varieties* of the Strawberry named as under culture in their garden: Old Scarlet, Black Roseberry, Bishop's Seedling, Knight's Large Scarlet, American Scarlet, Methven Scarlet, and Black Prince. In the third edition, published in 1842, there are *eight pistillate varieties*, being the same as above, with the addition of the Bishop's Wick; and more recently, Ingram's Princess Royal and Hovey's Seedling, both of which are pistillate varieties, have been under culture in England. It will thus be seen that seven of these pistillate varieties (termed by Dr. L. "sterile") have been in the London Horticultural Society's garden for more than thirty years, and that three other pistillates have been cultivated in England for a less period, and yet he has remained ignorant of their existence.

Dr. Lindley commits another great error when he assures us that the Fragaria Virginiana produces there always perfect (meaning hermaphrodite) flowers, when, in point of fact, the American Scarlet and Old Scarlet Virginian, Nos. 1 and 17 of the London Horticultural Society's Catalogue, and four seedlings therefrom, Nos. 7, 30, 31, and 40, also therein named, and which have been grown there since 1826, are all pistillate varieties of the Fragaria Virginiana. What is the use of optics?

It is plainly apparent that in Europe this subject of sexuality has been almost entirely overlooked by the mass, and that investigation has been neglected by the professedly scientific, and discouraged by the prolonged assumptions of Dr. L. and others, that the "science" of the otherwise "cute" Americans was mere "theory and assertion," which simply required a little English "practice and common sense" to regulate it. Thus they have, during the whole period of forty-four years since the establishment of the London Horticultural Society's garden, remained in the ignorance of "Intellectual exclusiveness," from which Mr. Wray's account of what he saw in America has at last awakened them.

Undoubtedly the publication by Mr. Wray of the "Scientific Culture of the Strawberry," resulting from his recent visit to our American gardens, will effect quite a change in the European method of culture, so that it will henceforth be based on those scientific principles long practiced in this country, and which were announced by my father, Wm. Prince, and myself in various Horticultural periodicals, and published in our "Treatise on Horticulture" in 1828, and which have been assumed by Mr. Longworth and others throughout our country, until they have become the recognized basis of all American Strawberry plantations.

So indispensable is this sexual combination to the production of abundant crops in all the American varieties, and in the Pine and Hautbois varieties cultivated in Europe, that it may well be doubted whether any person in England has yet realized what constitutes a full crop of Strawberries. Attention to sexual distinctions being indispensable in a scientific view, it is equally

demanded in every country and climate where Strawberries are grown that possess these characteristic distinctions. There should be no confused application of the sexual terms *staminate* and *hermaphrodite*, as the plants of these sexual divisions are entirely distinct; and while there are some species or families that combine both of these varieties, there are others that possess but one, to the entire exclusion of the other; and any lack of discrimination will consequently produce confusion. Nor should the term "sterile" be ever used in reference to staminates or pistillates, it being inapplicable to either.

It may here be cited as a singular fact, that of the eleven edible species of the Strawberry, there is but one which is positively known to combine all the three variations of staminate, hermaphrodite, and pistillate; although European writers, and some of our own, have run into the idea that the seeds of any one species would produce plants of all the three sexual divisions, and some have even declared that there was such confusion and vacillation in the sexuality, not only of seedlings, but of the actually existing varieties, that no reliance could be based on these distinctions as a reliable test for distinguishing species and varieties. Such views, however, are adverse to the facts. No such variations of character ever occur, but nature sustains these normal distinctions as permanent and eternal, the vacillations finding existence only in the brains of such theorists.

The Rev. W. F. Radclyffe and W. J. Nicholson have responded to Mr. Wray's article, but both appear to labor under an entire misconception of the actual question at issue. The former does not touch the subject of sexuality, but recommends about twenty European hermaphrodite varieties for American adoption, all of which have been tested here, and have proven failures as to crop, in field culture, and are only grown successfully there by special garden culture. He, however, admits "the disgraceful culture of this noble fruit in England." Neither does Mr. Nicholson seem to realize the real points under discussion, although he cultivates about 200 varieties of Strawberries. He claims that science is applied to the Strawberry culture in England, "without so much trouble as Americans give themselves about staminates, pistillates, and hermaphrodites." He refers to a crop grown in pots, the berries of which were sold at one penny (two cents) each, and then triumphantly says, "Science assists us in producing forced Strawberries." He declares that "practice and common sense" are all that are required for field and garden culture, but entirely ignores the scientific sexual facts on which that "practice and common sense" should be based. I regret to see that Mr. Gloede, in a response, adopts the same delusive error, which has seemed to confuse the brains of others, when we might expect more light from one resident in a climate where there is less fog and more mental electricity, and where people are less likely to reject scientific facts under the illusion that they are "mere theories," and adopt "mere theories" in lieu of scientific facts. Mr. G. says that he has grown "some of the American pistillate varieties under glass, and never one bloom failed

to perfect its fruit." We wish he had given us the names of these varieties, as we think we could then have solved the apparent mystery. Was the true Hovey one of them? When he can produce a crop of fruit from the Hovey, or any other truly pistillate variety grown separately, we shall expect women to give birth to children without a male parent.

Do, Mr. Gloede, repeat your experiments with more care. I regret to see that such trash as the Harlaem Orange, Monroe Scarlet, Marylandica, Scott's Seedling, and others, are supposed in England to be among our esteemed varieties, when they have all been entirely discarded here. Among the thirty varieties they call North American, (five of which are not so,) I do not see but six varieties that are here deemed worthy of culture, and they include but two of our estimable pistillates, whereas we have above one hundred splendid and very distinct varieties, remarkable for their vigor, hardihood, and abundant crops, many of them of an orange scarlet hue unknown in Europe, and including four large white varieties of great vigor and productiveness, and excellent in flavor, of all of which they appear to be entirely ignorant.

Although it is a truism that the differences between the humid and cool climate of England and our dry and hot atmosphere, cause the best educated English gardeners, who migrate here, to commit great absurdities; yet these climatic variations have no more connection with the sexuality of Strawberries, nor with the results of that sexuality in the productiveness of the crop, than they would have on two crops grown side by side, the one on dry soil, and the other subjected to irrigation. *Sexuality is nature's scientific fact.* The success and extent of the crop are the result of art and culture. The incontrovertible truth thus stands forth, that the exercise of science in regard to the existing sexuality is not necessarily variable by climate, but is quite as important in one country as in another. The chimerical idea of a transmutation of sexes, by any variations of climate or circumstances, is antagonistic to that order of nature which can never be varied or contravened any more in the humblest plant, than in the largest animal, or in the movements of the spheres.

> "From Nature's chain whatever link you strike,
> Tenth or ten thousandth, breaks the chain alike."

As climate—cold or hot, dry or humid—can in no wise affect the sexuality of any plant more than of any animal, the assertion, made by a quondam observer, that the Alpine varieties of Strawberries, which have perfect flowers (hermaphrodite) in the moist regions of perpetual snow, when removed to the drier climates of lower regions, produce pistillates and staminates as seedlings, *has no foundation in truth.* As the plants growing in the Alpine regions are all of the Fragaria vesca and F. collina species, I now put the question to every cultivator, whether he has ever seen one single variation as alleged in all the seedlings that have ever been produced from those two species. No such variation has ever

occurred, and the assertion is in direct contradiction to Dr. Lindley, who says he has never seen any other than hermaphrodite plants except of the Hautbois, (F. elatior.) It is also controverted by the fact that it is universally recommended that the Wood and Alpine varieties be propagated from seeds, their sexual organs being always perfect; and this course is specially urged by Keen in the London Horticultural Transactions, and in the "Bon Jardinier," they having been grown in France for centuries without the least variation.

If the observer who advanced such chaotic ideas of an equivocal creation had stated that men and women of those Alpine regions, when they emigrate to lower lands, transpose their sexuality, it would have been no greater absurdity.

We now come to the actualities of this question, over which European writers have been speculatively floundering, without anchor or helm, for the last thirty years, never once, in their observations and comments, touching the main point, or obtaining a truthful deduction by a scientific investigation of the sexual question, as presented to them by American publications thirty-four years ago. Nothing has been done, either by their Horticultural Societies or by men who, like Dr. Lindley, claim science as their especial guide.

All the esteemed European seedling varieties now cultivated in England, France, and Belgium are hermaphrodites, and Mr. Wray states that "these are so imperfectly developed in their organs, they seldom produce other than a very scanty crop of inferior and imperfect berries." "That the object of the high-priced grower is attained if he has only a few large sized berries on each plant, but that if these plants were placed in an open field, deprived of hand-glasses, artificial impregnation, and unremitting watchfulness, they would be dead failures, and for a general crop quite unsuitable."

It is admitted on all hands that the principal Strawberries in England are treated as tender exotics, and Mr. Wray asks, "Why is it so pampered, swathed, and swaddled, and its hardy character so completely ignored?" In England, the fine varieties of Strawberries are so expensively grown that they only reach the tables of the wealthy classes, whereas in America they are chiefly grown for the million. Mr. Wray also remarks that "so hardy a plant should certainly appertain more to open field culture than to the elaborate and expensive culture of the garden." The reason, he says, is "because science has not been applied to its culture," and hence "the supply is totally inadequate to the demand."

There are points of consideration other than the sexual question, which European writers and cultivators have hitherto lost sight of, and that even Mr. Wray does not seem to realize, which hold a most important bearing on the success of the Strawberry in open field culture in England, but as these appertain more particularly to that special point, I will defer making any comment thereon until my next article, which will be on *Culture*.

Here Strawberries are grown without any special care in vast fields of ten to fifty acres, without any covering or protection. The idea of treating our estimable

varieties as tender exotics, when their parentage is traceable to Labrador and to the Arctic regions on the Atlantic, and to Oregon and Vancouver's Island, and even up to the Russian possessions on the Pacific, is an absurdity which no American has been guilty of. Mr. Wray speaks of 5000 quarts being grown to an acre at Cincinnati, but on many plantations there and elsewhere 200 bushels (6400 quarts) are not considered an extraordinary crop, and in frequent instances it is claimed that the crop amounts to 250 bushels or 8000 quarts per acre. It is shown by our present statistics that one strawberry grower at Baltimore sent to market 6000 quarts a day, and sold his crop for $6200; that the sales in Cincinnati have attained to 9000 bushels annually, and that in one day 25 tons, deducting the weight of baskets, were brought by the Erie Railroad to New York, independent of the quantity furnished by other routes, the gross annual supply being estimated at over 40,000 bushels.

How great then the loss to Europe that they have failed to introduce our robust and productive American varieties.

Not content, however, with ignoring our productive pistillate varieties, the European culturists have, by an inanition scarcely conceivable, cast aside the advantages which nature had presented to them, and assumed the annihilation of the indispensable staminate plants of the Hautbois and Pine families.

The large "White fleshed varieties," as they are termed in Europe, and which are there held in most esteem, have all been originated from seeds of the F. grandiflora, which comprises both male and hermaphrodite varieties, and it has there been particularly insisted that the hermaphrodites of this family possess both male and female organs in perfection.

It is true that the organs are always present, but the male organs of these hermaphrodites are deficient in pollen, whereby a combination with the staminate is rendered indispensable to a perfect crop. The assumption of this fatal error as to the perfection of the hermaphrodite varieties culminated in the adoption every where in Europe of a system based on the destruction of all male seedlings, and a practice thus fallacious—an utter perversion of nature—has been universally urged in England and elsewhere throughout Europe, and has resulted in the extermination of the male plants. It seems never to have occurred to their superficial minds that nature, always equally economical as provident, and ever compensatory, had not furnished these staminate or male varieties without a purpose, and that they were, therefore, essentially necessary to the ample results which nature had designed as to the crop.

"Go, wiser thou! and in thy scale of sense,
Weigh thy opinion against Providence;
Call imperfection what thou fanciest such,
Say here he gives too little, there too much."

Although the hermaphrodite varieties combine the two sexual organs, yet normally but one of them is perfect and preponderates, and the other is defective; con-

sequently, the combination of the male is required in the one case, and the female in the other, to perfect a full crop. It would, therefore, seem that nature in the vegetable as in the animal kingdom is ever exercising her influence to the compensating principle, and that the means imparted are always in exact ratio to the result to be attained. And it must here be borne in mind that these sexual conditions are all normal or primeval, and consequently are permanent. From the time of Linnæus and Jussieu to the present day, we do not witness any sexual change whatever, and a standard that has remained unchanged from their day down to the present time, with no prospect of any future variation, may well be considered as permanently established.

When in any of the Fragaria species the male organs of the hermaphrodite are imperfect, nature, ever provident, furnishes the male or staminate plant to supply the deficiency. And when in any species the female organs in the hermaphrodite are defective, Nature presents us with the pistillate or female variety. But when any species, like the F. vesca and collina, and also the Indica, are perfect in both organs throughout all their varieties, Nature, never wasting her resources, gives us none other than hermaphrodites.

☞ THE FISH IN THE SUBTERRANEAN LAKE OF KENTUCKY HAVE NO EYES!!

These exterminated males are as necessary to make up the imperfection of the *male* organs in the European and South American hermaphrodites, as the female or pistillate varieties of North America are essential to compensate for the deficiency in the *female* development of our hermaphrodites. It is this perversion of Nature by the destruction of the male plants which she had furnished, that has rendered it necessary, in the humid climate of England, to have recourse to artificial impregnation by hand; and this attempt to improve on Nature, while really waging a most unnatural war against her, has been the continued cause of the miserable crops produced in England, where the flowers of many varieties are reduced by hand to four on each plant, and the plants have also to be specially nursed to insure the development of even this small product.

The wanton destruction of the male plants so necessary to efficient impregnation, is precisely similar to a man's cutting off both his natural arms, in order that he may find use for artificial ones.

The annihilation of the males of their own native Hautbois is not only strenuously urged in Europe, but it is declared by their most intelligent cultivators that it is to the existence of these "sterile (males are not sterile) plants," that the discredit and abandonment of its general culture is to be attributed, in consequence, as they say, of some people believing (as the Americans do) that it is necessary to combine the two sexes to secure a good crop; and that by adopting this course the "sterile plants" (males) overrun the females, and thus the beds become nearly barren. I suggest the adoption of our American practice of planting the sexes in distinct beds. I desire also to impress on Europeans that it is the same unnatural destruction of the males that has reduced the crops of the

Hautbois, which were formerly abundant in a state of nature, and I urge the adoption of American sexual science in their treatment, by which they will restore it to its former fertility. Thus by reversing their practice they will revolutionize the results. The additional normal fact that the four great families, the F. elatior (Hautbois) and F. vesca, (Wood,) the F. grandiflora (Pine) and F. Virginiana, (Scarlet,) *never blend with each other by any sexual union whatever, and can not consequently be fertilized except by their own staminates, renders the preservation of both sexes indispensable where they normally exist on distinct plants.*

As a proof of this fundamental fact, there has not during the 250 years which have elapsed since the first interchange of European and American Strawberries, been produced a single hybrid between the species of the two hemispheres, or between the three species which are natives of Europe, or between the species which are natives of South and North America. The six North American species blend sexually with each other, and the two South American species blend with each other, but these two sections can never be sexually blended, nor can any American species ever be blended with those of Europe. This normal fact of sexual aversion, which forms the scientific basis of all Strawberry culture, appears not to be understood by Europeans, as even the French as well as the English publications recommend that the male Hautbois be planted near the Chili and Pine varieties, in order to render them fruitful.

The neglect of scientific sexual culture has been more unfortunate in regard to the F. Chilensis, the largest Strawberry of the earth, than to any other. It appears that when this noble species, which, in its native country, produces fruit as large as a medium-sized hen's egg, was brought to Europe in 1712, only one sexual variety was introduced, and that its potent staminate, indispensable to develop so large a fruit, was left behind. The neglect of scientific scrutiny and the apathy which has consequently existed in Europe as to the present vital question, has caused their cultivators to ignore the great advantage attainable by the importation of the other sexual variety; and as the staminates of other species have proved uncongenial, the seminal production of this noblest of all Strawberries, by improved varieties, has had necessarily to be abandoned, and not one representative of this species now exists in the London Horticultural Garden, and, with the exception of three or four *hybridized* seedlings in France, the Chilensis is only known throughout England and the Continent as a botanical curiosity, not one genuine seedling having ever been produced for want of the other sex. Such is the unfortunate result for which the horticultural savans of Europe are responsible, by their having left the question recently propounded by Mr. Wray to be answered, at this late day, in the negative: "Is science brought to bear on the art of Strawberry culture in England?"

Mr. Wray, despite the adoption of the enlightened views lately presented by him, falls into some errors as to culture, which I shall correct in my next article; but there is one which I can not leave unnoticed at this time.

Mr. Keen has been referred to as having made some discoveries in regard to sexuality in 1809. He did so, and, as he states in the Horticultural Transactions, his discoveries were as to the Hautbois Strawberry only. Mr. Wray, however, applies this discovery to his "Keen's Seedling," which was not produced until 1821; to which, of course, it can have no application, and which, with his "Imperial," the only other variety he ever produced, are both of the F. grandiflora family, of which no pistillate variety has ever yet been produced in Europe, nor yet one enumerated in the London Horticultural Society's catalogue to the present hour. Mr. W. fell into this error probably by following Mr. Longworth, who makes the same transposition of facts and dates, the long period which has since elapsed probably causing forgetfulness of particulars.

The pistillate Keen's Seedling that found its way to Mr. Longworth is a misnomer. It is a native seedling of Indiana, of the wild prairie species termed F. Illinoiensis. I obtained it from Mr. Longworth in 1847, who supposed it had been imported from England; and I also obtained from him the Necked Pine, which proved to be another pistillate of the same Illinois species, although bearing a foreign title.

Prof. Huntsman (our closest observer of the Strawberry) and myself tested both, and we had many a laugh about the supposed voyage across the Atlantic. Mr. Hooper, also, author of the "Fruit Book," who lives within a mile of Cincinnati, states that the "Pistillate Keen" came from Indiana. Many of us were then cultivating the true Keen's Seedling and Imperial, which my father had received from the London Horticultural Society, and which were the same as have been cultivated here and in Europe down to the present period. Neither will produce a good crop unless attended by a Pine staminate. It is at the present time the *male organs* of all the European hermaphrodite Pine varieties, and not the *female organs*, as Mr. Wray, in common with others, supposes, that demand the application of a corrective by staminates.

It is this lack of investigation which has caused in Europe the failures in the culture and crops of the Pine and other Strawberries since the commencement there of the destruction of the staminates, and which has also given rise to the many *outre* speculations on the subject which have been advanced on that side of the water. Duchesne long since recognized the sexuality and dicœcious character of the Fragaria elatior, (Hautbois,) and was reprimanded therefor by Linnæus; but, like the more modern European cultivators, he failed to penetrate deep enough, and to thereby realize the great importance of this fact, by adopting a course of culture based thereon.

As the discovery made by Mr. Keen concerning the sexuality had reference only to the Hautbois—an European species—and as the practice of sexual combination of our American varieties existed here antecedent thereto, and of course long before Arbigust carried the supposed secret to Cincinnati, the fanciful supposition of Mr. Wray, that Mr. Arbigust, the German market gar-

dener of Philadelphia, obtained his information from Mr. Keen, can have no foundation whatever.

Mr. Wray further remarks, that "after Keen, a Monsieur Duchesne arrived at a similar knowledge of the sexual differences in the Strawberry." But as Monsieur Duchesne was a cotemporary of Linnæus, and announced his discovery long before Keen was born, we can scarcely accord to the latter the credit of originality, however desirous we may be to aid in the beautiful harmony manifested by Mr. Wray and Dr. Lindley on this one point—that all the germs of intelligence first emerge from the fogs of Britain. The most astonishing fact, however, is, that the savans and cultivators of Europe have hitherto completely ignored the discoveries of both these investigators, as regards their scientific application and benefits to the Strawberry culture.

THE NATIVE LOCALITIES OF STRAWBERRIES.

Europe presents us with three species, which in their normal state all produce fruit of small size. Two of these species have hermaphrodite flowers, and the third (Fragaria elatior) combines male, female, and hermaphrodite flowers. These European species are:

Fragaria vesca—The Wood and Alpine Strawberries.

Fragaria collina—Green Pineapple Strawberry.

Fragaria elatior—Hautbois Strawberry.

Fragaria monophylla of Linnæus does not exist as a species, it being a variety of F. vesca.

Fragaria sterilis of Linnæus has proved to be Comarum fragarioides.

Asia presents us with one hermaphrodite species:

Fragaria indica, producing yellow blossoms, whose fruit is not edible.

Note. Both Linnæus and Miller supposed, and so stated, that the F. elatior (Hautbois) was obtained from America, an error that can scarcely be accounted for.

South America presents us with two species, both of which have large foliage and flowers, and fruit of remarkable size, and which comprise in their normal state both staminate and hermaphrodite varieties. These are:

Fragaria grandiflora—Pine Strawberry.

Fragaria chilensis—Chili Strawberry.

Fragaria Bonariensis of Loudon is only a synonym of F. grandiflora.

North America presents us with six species very distinct in character from all the European and South American species, and producing fruit varying from a medium to a large size.

These species each present in their normal state plants of two characters: 1st, Hermaphrodite or Bisexual; and, 2d, Pistillate or Female.

Of the Hermaphrodite section, there are two divisions; the one combining the stamens and pistils in each flower; and the other producing some peduncles of

entirely bi-sexual and others of entirely pistillate flowers. These American species are:

FRAGARIA VIRGINIANA VEL CANADENSIS—Scarlet Strawberry.
FRAGARIA HUDSONICA—Hudson's Bay Strawberry.
FRAGARIA IOWENSIS—Iowa Strawberry.
FRAGARIA ILLINOIENSIS—Illinois Strawberry.
FRAGARIA LUCIDA—California Strawberry.
F. SERICEA OF DOUGLASS,
F. CHILENSIS OF TORREY AND GRAY, } Oregon Strawberry.

FRAGARIA CAROLINIENSIS of Loudon has no distinct existence, but is merely a synonym of F. grandiflora.

FRAGARIA CAROLINIANA of Duchesne and Poiteau is also a synonym of F. grandiflora.

The European species being hermaphrodite, and but one of the North American species known to Europeans in the time of Linnæus, he supposed that all the species of the genus Fragaria were of the same character, and he consequently placed them under the class and order, *Icosandria-Polygynia*, comprising the stamens and pistils in the same flower. The two South American species, which comprise staminate and hermaphrodite varieties, and whose large fruit caused them to be preferred in Europe, are the only species from which the numerous seedling varieties they now possess have been originated, and as but one sexual variety of the Chilensis was carried to Europe, there have been only a few hybrids grown therefrom. All the others are seedlings of the F. grandiflora, and they are very numerous throughout Europe. These seminal varieties have retained their normal parental character, as this species does not admix with the European and North American species, and could not fully admix, even with its own congener of South America, (F. Chilensis,) as but one sex of that species had been obtained.

This primeval character, comprising staminates and hermaphrodites, has always been sustained, but the adoption in Europe of an unnatural system based on the extermination of all the staminates, (males,) has resulted in filling the gardens of Europe exclusively with varieties of the hermaphrodite character; and as preference has been there given to these large white fleshed varieties over the scarlet fleshed varieties of the Fragaria Virginiana, it has caused an almost total exclusion from their gardens of all the North American species and varieties. The prejudice thus generated has prevented the introduction into Europe of the productive American pistillate or female varieties as well as of the hermaphrodites, comprising the numerous large hybridized varieties which constitute such remarkable improvements over the few North American kinds they already possess, both in the size and flavor of their fruit, in the far greater hardihood of the plants suitable to the most northern climates, and especically in their great productiveness, the latter quality arising from their sexual physical capacities, and from the "Scientific culture of the Strawberry" in the combination of the sexes.

Europe at the present time possesses no female varieties except the pistillate

Hautbois, which she exterminates, and the few pistillate varieties of Virginiana, mostly obtained from America 200 years ago, and two only of our estimable pistillate varieties, which have been recently introduced there; this deficiency having resulted from her fatuity in ignoring the rapid progress made in the Strawberry culture in America during the last fifty years.

Black Strawberries.—The varieties which are so called, and classed as a distinct species or family in the London Society's Transactions, are not actually so, but are merely very dark colored varieties of the F. Virginiana or hybrids. No such distinctive division is made by the French and Belgians. The Downton is a seedling of F. Virginiana, and others may be hybrids, such as Black Prince, Hovey, &c.

In Johnson's Dictionary of Gardening, this section is distinguished as "*F. vesca nigella*," but as F. vesca is European, and all the Black Strawberries are from American species, the author could not have been very conversant with the subject.

Mr. T. A. Knight, when President of the London Horticultural Society, raised a large number of seedling Strawberries, from which he selected about twenty varieties, which were described in the Society's Transactions, but these were grown from seeds injudiciously selected, without any proper regard to sexual hybridization, and it would seem that he was then, as Dr. Lindley has been since, ignorant that such sexual distinctions existed, although he had seven pistillate varieties in the Garden over which he presided. The varieties produced by him have, in consequence of their inferiority, been long since abandoned. Mr. Knight considered the F. grandiflora or Pine, the Chilensis or Chili, and the Virginiana or Scarlet, to be only varieties of one species, as all these (he says) may be made *to breed together indiscriminately*. This is a radical error. The first two species will blend with each other, although they are very distinct, but these two differ so entirely from the Virginiana that they never commingle therewith.

The collection of the varieties in the Horticultural garden being a general one, the pistillates were fertilized by the adjoining hermaphrodites, and as Dr. Lindley appears to have exercised no scientific scrutiny, he failed to ascertain the fact that some varieties do not possess both sexual organs, and that the productiveness of what he would have otherwise termed "sterile" plants, was the result of the accidental application of the same combination of the sexes which has proven so successful in America, but which has been denounced by him for twenty years as having no scientific basis.

In my next communication I shall discuss "*The Scientific Culture of the Strawberry, with its Sexual Physical Character*," as applicable to all the species in their relative productiveness; after which I shall take up the question of *American Grapes*, and refer to the gross prejudices and ignorance existing in Europe on this most important subject; and in a subsequent article I shall discuss the *Currant Question*, as a rejoinder to a response and attack which appeared in the *Gardener's Chronicle* in regard to an article I wrote on that subject in the *Rural New Yorker*.

[The length of Mr. Prince's elaborate article precludes remark.—Ed.]

EDITOR'S TABLE.

To Contributors and others.

Communications, Letters, Catalogues, Periodicals, Remittances, &c., should be directed to MEAD & WOODWARD, Editors and Proprietors, New York. Packages by Express and City advertisements to 25 Park Row. Exchanges should be addressed to "THE HORTICULTURIST."

OUR NEW VOLUME.—We send out this the first number of our new volume, anticipating for it a generous welcome, not only from our old friends, but from many new ones. To the extent of our time and means, we have toiled for them faithfully; though conscious that we have not done all that we might, we nevertheless leave our labors to speak for themselves. We shall strive in the future to make the HORTICULTURIST every thing that it should be; we may fall short in some things, but it will not be for want of a desire to excel in our labor of love. The nation is passing through a terrible ordeal, in which our constancy, courage, and love of country are being sorely tried; but the Union will not be divided, for there is no line where a division can be made. We shall come out of this war as we went into it, a united, and, let us trust and pray, a wiser and better people. In the mean time, we shall need all the "aid and comfort" we can get from our friends, and from our enemies too, if we have any. Thus far they have been afforded to a degree which we could hardly have hoped for, and for which we are grateful. We shall strive to deserve their continuance. It will not be out of place here to thank a large number of our friends who have sent us letters of congratulation and commendation. It is always a satisfaction to know that our labors have, to some extent, been appreciated; besides, it acts as a stimulus to still greater exertions in the future. All these sentiments of kindness, and much more, we most cordially reciprocate. May a kind Providence give them abundantly of all good things. And thus wishing, we send greeting to all our readers—a *Happy New Year.*

THE PINEAPPLE.—(*See Frontispiece.*)—We have for some time back been experimenting in Photography, (or, more strictly, Mr. Morand has been doing it for us,) to ascertain how far this beautiful art could be made available for illustrating our magazine. Mr. Morand, who is one of the earliest as well as one of the best artists in his profession, has at last succeeded in giving us portraits of fruits and flowers incomparably superior, in our estimation, to any lithograph that can be made. A photograph costs us more money

than a lithograph; but the former, besides presenting an exact portrait, is in all other respects so much better as a work of art, that we shall endeavor hereafter to give all original subjects in the form of a colored photograph for our colored edition. We did not, however, find a person who could color these photographs to suit us in time for the present number, and we had recourse to a subject that could be presented without color. This we found in Mr. Chamberlain's Pine-apple in one of his moss baskets exhibited at the Brooklyn Horticultural Society, and which, on application, he promptly placed at our disposal. We selected this the more readily, because we find that a great many people suppose that Pine-apples grow on large trees. If there are any such among our readers, we desire to say to them, that our frontispiece presents a full-grown plant, basket and all, the height being about three feet. The card on the plant has an inscription on it, which the reader can make out with the aid of a magnifying glass. For the plain edition we give a fine wood-cut of the same subject. Having compared some of our best wood engravings with our lithographs, we could not help being struck with the better artistic effect of the former, and therefore determined to give one as a frontispiece to the plain edition, printed on fine paper with the best ink. These changes involve an additional outlay, which we shall not feel warranted in making during these hard times, unless they meet the approbation of our subscribers; we should, therefore, be glad to hear from them on the subject. We do not think our readers can help being greatly pleased with the photographs we have in preparation; and we shall take no little pride in having been instrumental, in illustrating our fruits and flowers, in securing the aid of the very power that is materially concerned in growing them, and developing their perfections.

Mr. Richardson's Seedling Dahlias.—We have heretofore spoken of some of these fine seedlings, especially *Mrs. Richardson*, a large blush white, of fine form and good substance, and *Emma Cheney*, a lovely rosy red, very distinct, and of remarkable merit. We selected a number of others possessing decided merit, very much too good to be lost to the world, and advised Mr. Richardson to send them out. This, we are glad to learn, he has concluded to do, and has accordingly placed a portion of them in the hands of Mr. Peter Henderson, of Jersey City. We have named them as follows: *Carrie Emmons*, in the style of Lollipop, but an improvement; size medium, form perfect, petals finely cupped, and of faultless symmetry. *Debbie de Gray*, light amber, edged with rosy purple; a dome-like form, well up in the centre; cup-petaled, of good substance, and very constant. *Jeannie Tomkins*, a bright golden orange, fine in form, color, and petal, and of good substance. *Charles Downing*, a rich amethyst, beautiful form, high and full centre, fine petal, good size, and constant. *John W. Degrauw*, a bright scarlet of beautiful form, cup-petaled, very full, high centre, and great substance and constancy. *Dr. Knight*, a fine bright yellow, full, fine form, high centre, and very constant. *Mary Green*, pure white, beautiful form, high, full centre, perfect arrangement of petal, and great substance. *Frank Smith*, deep, clear red, fine

form, cup petals, and great substance and constancy. There are several others very fine, which will be named at another time. The above are an exceedingly fine lot of Dahlias, and will not suffer by comparison with the best yet imported; they have the advantage of having been tried, and found adapted to our climate. We shall give a portrait of Emma Cheney, and probably some others.

A New Use for Crinoline.—A lady correspondent of the *Cottage Gardener*, who signs herself "Kate," says: "The fruit trees in my orchard house have been much blighted this year; tops of the young shoots curl up. I have, I think, destroyed the fly now. Not being able to smoke the house in the ordinary way, I have used a lady's crinoline. I bought a cheap one covered with glazed calico, pulled it up round a pole, making it as close as possible. It is just the size to cover one of Mr Rivers's miniature trees. I use Gedney's Fumigator, and leave on the crinoline till the next morning. I then syringe the trees. The fly has no chance against the tobacco in so small a space, and the tree does not appear the worse." For standard trees we suggest the use of that style of crinoline sometimes worn in New York omnibuses.

Protection against Mice in Winter.—The mischief committed by mice during the winter in gnawing trees is not only an annoyance, but often a serious loss. Various preventives have been suggested, and we have recommended some which we know to possess more or less merit. Being recently at the fine residence of B. Vaughan, Esq., we observed that all the trees in the orchard house were protected by tin, and was assured that it had always proved effectual. A piece of tin six or more inches long, and wide enough to meet the circumference of the tree, is rolled around it, and pressed a little into the soil; in other words, the stock of the tree is inclosed in a small tin cylinder from the surface of the ground to a height of six or more inches. In the spring the cylinder is unrolled and removed, to be replaced again the following fall. A similar contrivance, made of zinc, we should think would prevent the borer from entering the peach and other trees; at all events, it is simple, cheap, and worth trying. The borer will, however, sometimes enter the peach a foot or more above ground when cut off from below; but then he is more plainly in view, sooner discovered, and easily killed.

A New Use for Apples.—The following, from the London *Times*, may be of interest to some of our readers: "We are threatened with a cider famine, not from the failure of the apples, although a partial crop, but because they are likely to be applied to a more profitable purpose (so far as the growers are concerned) than in making a household beverage. It seems that the Manchester calico dyers and printers have discovered that apple juices supply a desideratum long wanted in making fast colors for their printed cottons, and numbers of them have been into Devonshire and the lower parts of Somersetshire buying up all the apples they can get, and giving such a price for them as in the dearest years hitherto known has not been offered. We know of one farmer in Devonshire who has a

large orchard, for the produce of which he never before received more than £250, and yet he has sold it this year to a Manchester man for £300. There can be no doubt that the discovery will create quite a revolution in the apple trade."

THE BROOKLYN HORTICULTURAL SOCIETY—OFFICERS, ETC., FOR 1862.—The Society has elected the following officers and committees for 1862:

President, John W. Degrauw; *Vice-Presidents*, S. J. Eastman, J. A. Wallace, Lyman Burnam, R. W. Ropes, H. M. Barnes; *Treasurer*, J. W. Degrauw; *Corresponding Secretary*, C. B. Miller, 29 Broadway, N. Y.; *Recording Secretary*, J. C. Marin; *Librarian*, J. C. Sidell; *Executive Committee*, P. B. Mead, Geo. E. Woodward, Geo. Hamlyn; *Finance Committee*, Walter Park, R. W. Ropes, H. M. Barnes; *Library Committee*, C. B. Miller, S. B. Brophy, J. C. Sidell; *Publication Committee*, L. A. Roberts, Geo. E. Woodward, S. B. Brophy; *Premium Committee*, A. S. Fuller, E. Scott; *Committee on Fruits*, Geo. Gamgee, W. I. Reddy, J. Dailledouze; *Committee on Plants*, Andrew Bridgeman, Robert Murray, G. Messelberg; *Committee on Vegetables*, G. Marc, A. G. Burgess, O. Zellar; *Inspectors of Election*, Geo. Ingram, Geo. Hamlyn.

The regular business meetings are held at the Athenæum on the first Tuesday evening of each month; the conversational and exhibition meetings on the second and fourth Tuesday evenings of each month.

ADVERTISEMENTS.—Our time for receiving advertisements expires on the 20th of each month. We should be glad to have them sent in early. Be particular to state how much space is to be occupied. Each advertiser should regulate this matter for himself.

STATEN ISLAND HORTICULTURAL SOCIETY.—The following is a list of officers of this new society: *President*, Francis G. Shaw; *Vice Presidents*, Mr. Rainsford, John Thompson, Mr. Mendall; *Corresponding Secretary*, William Elliott; *Recording Secretary*, William G. Ripley; *Treasurer*, John Jewett, Jr.

THE HOMESTEAD.—We had learned, with deep regret, that the *Homestead* was to be discontinued, but deferred making the announcement, in the hope that some means would be found to continue its publication. In this we have been disappointed. It has now been merged in the Agriculturist. The Homestead has always been a favorite with us, and we shall miss it with its well-stored pages. That there should be any necessity for suspending such a valuable paper, with such an able and genial-hearted editor as Mr. Weld, is a sad comment on the times in which we live.

FRUIT GROWER'S SOCIETY OF WESTERN NEW YORK.—The annual meeting of this Society will be held at the Court House in Rochester, N. Y., at eleven o'clock A. M., on Wednesday, January 8, 1862. Our friends there expect a fine show of fruit, which we hope may be the case. Will Secretary Bissell be so kind as to send us an abstract of the proceedings?

THE PÆONY.—Mr. Prince, we see, has in the December number of the *Gar-*

dener's Monthly begun a series of articles describing the different species of the Pæony, a most interesting group of plants, many of them by no means as well known as they should be.

TUCKER'S ILLUSTRATED ANNUAL REGISTER.—The Annual Register for 1862 presents more than its usual claims. The matter is very judiciously selected and condensed, every thing superfluous being pruned off. Besides the Almanac proper, there are many solid and very useful articles on various subjects interesting to the farmer and gardener; among others, an excellent article on farm buildings, a very interesting article on the growth of plants, another on grasses, one on lightning rods, a very elaborate, practical article on "balloon frame" buildings, by Mr. Woodward, an excellent article on movable comb bee-hives, by Mr. Quinby, and many others, the whole edited by Mr. John J. Thomas. All the above are profusely and handsomely illustrated, which gives them an additional value. Mr. Woodward's article alone is worth many times the price of the Register. The Messrs. Tucker are entitled to much credit for the manner in which this useful little volume is got up. It is for sale by them, and also by Mr. Saxton, 25 Park Row, New York. The price is 25 cents.

Descriptive Catalogue of Fruit Trees, Small Fruits, Grape Vines, Rhubarb, etc., cultivated and for sale at the Cherry Hill Nurseries, West Chester, Pa. *Hoopes & Brother*, Proprietors.

An Address delivered before the Oswego County Agricultural Society at Mexico, September 11, and before the Franklin County Agricultural Society, September 13, 1861. By LUTHER H. TUCKER.—An able and very interesting Address, published by request, and worthy of an attentive perusal.

The Journal of the New York State Agricultural Society for December, 1861.

Mount Hope Nurseries, Rochester, N. Y., *Ellwanger & Barry's* wholesale Catalogue or Trade List of Fruit and Ornamental Trees, Shrubs, Roses, Dahlias, Bulbous Roots, Border Plants, Seedlings, etc., for Spring of 1862.

Isaac Buchanan's General Catalogue of Green-house, Hot-house, and hardy Plants. Nursery, Astoria, L. I. Conservatory and office, 9 West 17th st., New York.

Descriptive Catalogue No. 7: Bulbous and Tuberous Roots.—*Andrew Bridgeman*, No. 878 Broadway, New York.—A very choice Catalogue of Hyacinths, Tulips, Narcissus, Crocus, &c., with directions for their cultivation. These bulbs are indispensable for winter blooming.

The Journal of the New York State Agricultural Society.

Descriptive Catalogue of Fruit and Ornamental Trees, cultivated and for sale at the Prospect Hill Nursery, Massillon, Ohio, by *S. B. Marshall.* 1861–62.

Catalogue of Plants cultivated and for sale by *Peter Mackenzie & Son*, Camellia Place, Broad street and Columbia avenue, Philadelphia, Pa.

Patriotism of the Plow: an Address delivered before the Queen's County

Agricultural Society at the Twentieth Annual Exhibition, at Flushing, L. I., October 3, 1861. By Richard C. McCormick.—An address full of interesting historical reminiscences. It was listened to with marked attention; we shall find room for a few extracts.

New Haven Nursery, Fruit Trees, Evergreens, etc., *F. Trowbridge & Co.*, Proprietors.—Attached to this circular is a brief treatise on the cultivation of the Cranberry, which Mr. Trowbridge makes a specialty.

Correspondence.

Lockport, N. Y.

GENTLEMEN:—We are sadly perplexed by the conflicting statements and opinions of nurserymen and dealers in fruit trees. We purchased, this fall, of one party, Grape roots, (Delawares,) one year raised from one eye, in pots, under glass. There was a mass of *small fibrous* roots, and but few of any size. The vines are three or four feet long, small, and long jointed. These were claimed to be, and sold for, A No. 1 Delaware roots of one eye, under glass, and as being far superior to a larger, longer, and less fibrous root. We also purchased, of another party, Delawares *one year old*, raised in a novel (to us) manner—in an elevated bed, or border, of ordinary soil, without any forcing or manuring. These roots are large, and average from one foot to three feet in length. The vines from eight to twelve feet in length, and wood well ripened. These are also claimed to be superior to the small fibrous-rooted vine. Who shall decide, when doctors disagree? It is claimed by the latter grower that the small, fibrous roots decay when transplanted, and that new fibrous roots are reproduced each year. There is still another point of difference. Some contend that a root raised from a *single eye* is better than a *layer;* and again, that those under glass are superior to open, out-door culture.

Will you be so kind as to give us your opinion on these points of difference among grape growers, through your columns?

We intend to set out a large number of Delawares—probably several thousands—when we can learn definitely what kind of roots to buy. Our *Pear* orchard, in the spring, will be about 1,500 of Dwarfs and Standards.

In this department, also, new beginners are subject to indecision in selections, so many varieties are recommended as *best.* Some say that Dwarfs are a failure—for fruiting for profit, and that Standards are the best and only reliable, and *vice versa.* We have, however, confined our varieties mainly to Duchesse, Louise Bonne, Seckel, Bartlett, and Flemish Beauty.

Yours truly, J. S. WALTER.

P. S.—I should have said that, in the *elevated border*, the whole was under

glass, and hot water was the medium of heating or warming the Grape house. But no forcing other than this was used. W.

[A general demand for a plant, consequent forcing and use of bad wood, and indifference to his reputation on the part of the propagator, are very much in the way of procuring really good plants; we might add, too, an indisposition on the part of the purchaser to pay a fair price for a well-grown plant. The first plants you describe we should not have selected, though we had not seen the roots: the canes plainly indicated that the roots were not in the best condition: the vines had probably been forced and crowded too close together. A vine duly furnished with fibrous or secondary roots is, beyond all peradventure, better than one not so furnished; but then, fibrous roots, to be good, must have size and substance. As to a choice between a vine from an eye, duly furnished with good fibrous roots, and a layer with long primary roots and few fibres, we have made too many experiments in planting to leave a doubt on our mind. When an experienced planter receives a vine with these long roots, he cuts them in, and his object in doing this is to produce fibrous roots. There are a multitude of reasons why a vine of the first class is better than one of the second. It is true, if not perfectly natural, that each propagator claims his own vines to be best; but we have never experienced the least difficulty in deciding between them, when we could make an examination of their vines. In the sense in which your second doctor manifestly puts the case, it is not true that the fibrous roots decay when the vine is transplanted; neither is it true that they are reproduced every year. We can easily explain what really does take place, but we leave the case thus broadly put in order that our readers may discuss the point, if so disposed. In regard to vines raised from eyes and layers, we have no doubt at all that the first are by far the best, except for a few special purposes. The best kind of vines can be grown under glass, provided they are not forced or otherwise improperly treated. Some native vines can hardly be raised in the open air, and success there is much less certain. Our advice to you, is to purchase vines from eyes, well furnished with strong fibrous roots, bright and healthy: do not misunderstand us as meaning a mass of small, weak fibres. The canes should be stout, (according to the kind,) short-jointed, and well ripened. With such vines, you can not help succeeding, unless you make some very sad mistakes. We think you have done wisely in planting a Pear orchard. If Dwarfs are properly selected as to kinds, well planted, and properly treated, you will find them profitable, unless there are some peculiarities about your soil which unfit it for this kind of culture. Your selection is good, but the Duchesse must be grown only on quince.—Ed.]

Mr. Editor,—Has a lady a right to make a suggestion to the Horticulturist? I think I hear your prompt reply, Yes, and proceed to put it. I am cultivating a few house plants, which give me a great deal of pleasure, but have come to the conclusion that I don't know all about it, and should like to know more of the

exact when, and where, and how. I have such a magnificent Calla in bloom now, by following your instructions, that I am anxious to profit further. I feel quite sure that there are others of your nine thousand readers in a similar condition, so when you answer my questions, for there will be more than one, you may be doing much good to others, especially to new beginners, of whom I conclude you will have many among your subscribers. What I want is something practical, and applicable to the every day culture and management of parlor plants at this season, and also of those that grow in flower beds in the open air, *which a lady prefers to attend to in person, for the pleasure it gives her.*

I have often purchased fine plants from the florist, and on taking them home, found that I could not manage them; they would perish in spite of all my care; were too hot, or too cold; too dry, or too wet; required new earth, or a fertilizer, or something else, which I could not find out until too late, for which reason I have lost much enjoyment; but I have learned much by experience, though I know there are many who would be discouraged by such bad luck. A writer in the October number, Mr. Woodward, says, "The successful pursuit of landscape gardening, like all other liberal arts, depends upon a thorough understanding of results." Now, the cultivation of flowers is a liberal art, and what I want is a thorough understanding of results, and the mode of producing them, which I can not find in any book on gardening or flower culture, nor do I know where to purchase one. What I want is plain directions for ladies who cultivate their own flowers, showing when and how to set the slips or cuttings, how to make them take root, how and when to water, when to transplant, what soil or compost to put them in, when and how to pinch in, which require sun and which need to be shaded, when and how to give air, etc. One plant requires quite different treatment from another, and if any number require the same treatment, let them be grouped together. Let these directions be so plainly stated that no one can mistake the method. Remember that we are more practical than scientific, and wish you to write on common-place topics which educated gardeners know already. We want you to write for your Ladies' Department of the Horticulturist, precisely what you *talk* to the ladies at the Brooklyn Horticultural Society's conversational meetings, in the reports of which I have taken great interest. Consider that but few of your readers can attend those meetings, and when you report that "Mr. Bridgeman spoke of the Gladioli, and how they had been so greatly improved during the past few years," that *we* are still in ignorance of the method. Your explanation of the mode of striking rose cuttings is worth a whole year's subscription to the HORTICULTURIST, for I have tried it, and succeeded. The liberal ideas, too, of the professional gardeners at these meetings is worthy of notice. Mr. Fuller shows his good sense when he advises gardeners, "if they knew of a better way of growing a plant or flower, it was their duty to let the public know it;" and "if one gardener knows how to grow dahlias, or roses, or pinks better than any body else, let him tell his plan." That is the true liberal doctrine, and it will pay too.

Now, Mr. Editor, will you write an article for the readers of the HORTICULTURIST on the culture and management of one flower at a time in your own concise and plain way, and follow this up in each number? Give us practical information. Your elaborate instructions how to plant and cultivate a grape vine, if applied to flowers, would produce many choice gems in our flower beds and parlor windows, and beget a great demand for choice new varieties. Perhaps this may be all very plain and simple to you, who have spent a lifetime in study and practice; but you must not expect us, who make your plum puddings on Thanksgiving day and Christmas, to know it all. Remember, too, that we actually have other domestic duties to perform every other day of the year, and that we are not all butterflies; that we cultivate flowers for recreation, because we love them, and not as a business. You may perhaps say, consult your gardener or florist; but you do not know that they are both old fogies, who are sure to teach me how-not-to-do-it: the one is afraid we shall no longer need him, the other fears we may raise all our own flowers, and need buy no more of him. They are both short-sighted, as I should be more likely to need two gardeners, and to buy two or three new and choice plants where I now buy one, if they encouraged my taste. I read the whole of every number of your HORTICULTURIST, including the advertisements, with much interest, and conclude by assuring you that if you comply with my request, the ladies will take care of your subscription list. FRANCES MARY.

[Yes, the ladies have a right to ask the HORTICULTURIST any thing they please, and we will do it. For instance, if one of them should ask us to turn into a polly-wog, into a pollywog we should turn incontinently; at least, they would expect it. Glad to hear you have a few house plants; what could be more appropriate for a lady? If you don't know all about them, we judge you are in a happy condition to learn; and that is just as it should be. All the girls, as well as you, might have magnificent Callas in bloom, and a good many other nice things, if they really followed our instructions.—Here we have the florist again selling flowers without telling how to take care of them: we have given him a good scolding elsewhere.—Well, how you do put the questions; thick and fast, like the drops in an April shower; but we can stand it; we are used to being out in the rain.—The boys in Brooklyn will all be in love with you after such a meed of praise, which, we beg to say seriously, is just and well deserved.—Oh! Frances Mary, how could you dash the romance out of that last sentence by adding the cruel words "subscription list." No matter, we'll give you the articles on Parlor Plants all the same; but we can not promise the first one till next month. We were full before your letter came to hand.—ED.]

P. B. MEAD, ESQ.: *Sir*,—In regard to the proposition now pending before our Society, to allow twenty per cent. commission to members, or, in the words of the resolution, "Every member selling five annual tickets shall be entitled to his own gratis," for one, the thing struck me as very objectionable. I think it would deter

many, who would otherwise canvass their friends, from doing so, and unduly stimulate others, until they would be voted bores, and so disgust people, that out of spite they would *not* subscribe, though they would like to do so. It was argued that what was every body's business was nobody's, and nobody attended to it. If the members will not use all proper means to influence additions without this "consideration," they are a very contemptible lot. I speak of the thing as it is now, and as we hope and have good prospect of making it; in the half-torpid condition in which it has slumbered until the past year, it could not be expected that people would trouble themselves about it; now that they can with a good face do so, I think it a pity this wet blanket should be thrown over them. The gardeners are stupid if they will not; for it is directly to their personal advantage to do so; they and the Society are, or should be, one, and their interests identical. The more they can induce to join, and the more they interest them after they have done so, the more and better customers they will have.

Should think it would be more satisfactory to deal with those who knew what they wanted, and how to treat it after they got it, than with those entirely ignorant. There would be fewer complaints of plants and trees dying, (always the gardener's fault,) if the buyers knew better how to manage them. Perhaps some of the extra smart ones think this is good for trade, that they have to be replaced. I think they are mistaken. Success is necessary to the continuance of any thing; the unlucky ones will soon become discouraged, and cease buying.

On our meetings.—Do you not think there is too much time wasted in laudation? I have no wish to detract from the merits of the Society or Officers, but I think we have had glorification enough, and that it would be better to *do* something rather than dwell so much upon what has been, or is *going* to be done.

What in the world do we want with so many Officers and Committees? A President, Secretary, and Treasurer, it seems to me, would answer for all except the three last committees. This would involve the necessity of an act to alter the Constitution; to avoid that trouble, why not elect the Vice-Presidents from the working members, and fill the other offices and the committees from that body, as I see nothing limiting the number of offices a member may hold?

What is the good of our Library, such as it is, inaccessible to any one except at time of meetings, when no one wants to look at it? If we can not at present afford the accommodation it is conceded we ought to have, at least can not the key be left in charge of some one, to deliver to members when called for? If only this partial use were made of it, I think the Library would increase considerably, independent of purchases.

I am a Free-trader, but judge the object of our and similar societies must necessarily be in a measure local; the "State of Long Island" I should think a wide enough field for ours. I would not exclude foreign exhibiters, but the propriety of allowing them to compete with natives may be doubted. A Flatlands gardener would probably run behind a Delaware one in early vegetables, and yet be entitled to as much credit.

At any rate, it is unjust that *extra* inducements be offered to large foreign exhibiters; they overshadow and frighten away our small home ones, whom it is our especial mission to encourage.

You may say, "But we can not get up a good show without them." You never will with them (in competition)—that is, OUR *show*.

I think it is wrong that the gardeners are so averse to playing second fiddle, and consider it the duty of every member to bring whatever he has presentable, without regard to his chance for premiums, or whether or not one is offered for what he has to show, but such at present certainly is not their feeling, and on the point above stated think they have just ground for complaint.—BROOKLYN.

["Brooklyn," as usual, is pointed and vigorous. There is no member of the Brooklyn Society who more cordially wishes it success, or does more, in his sphere of action, to insure its success. In regard to the commission for new members, it may be open to the objection of associating sordid motives with a duty which ought to be entirely free from them. Each member ought to consider it equally his duty and his privilege to introduce as many new members as possible, and will, if he is a faithful member, and loves the cause for which the society labors. We should be glad to know that the Society could increase its members' list without this consideration. It has lately shaken off its slumbers, and shown a degree of vitality which encourages us to hope great things from it. We think it is generally understood now that we are to enter the field of *action;* but then this formidable list of Officers and Committees *is* in the way of that somewhat. The objection is not so much to the number of committees as to their size. We have done a prodigious amount of committee work in our day, and the result of our experience has been to beget a prejudice against large committees: as a general thing, we decline to serve on them. They are admirable contrivances for doing nothing. Whether some reform might not be made in this respect in the case referred to, is a matter for grave consideration.—In regard to the Library, we think the new order of things will work some salutary improvements: let us afford the opportunity.—That foreign contributors compete with local ones is altogether owing to the invitation of the Society itself. They do not ask any special privileges, and we have no doubt they would be very glad to compete in a class by themselves, leaving the local exhibiters to do the same. The Brooklyn Society is under many obligations to outsiders, and we do not think it would be wise to exclude them; "Brooklyn," we suppose, would hardly propose this. Their presence acts as a healthy stimulus under proper conditions. The prize list could be made to regulate this matter so as to please all parties. The prize list, aside from this "foreign" consideration, is very far indeed from satisfying the "home demand."—It is plain to us that every member is under obligations to present at the public exhibitions any thing that he may have that is really good, no matter whether a prize be offered for it or not; and it is equally

plain to us that no member has a right to go off in a pet because he has not taken all the first prizes, or even one. We wish such persons could see, if only for a moment, how very unamiable they look. If you do not get the prize this time, go in for the next, and show your pluck.—Ed.]

HORTICULTURAL SOCIETIES.

Under this head we propose to give, in a condensed form, the proceedings of Horticultural Societies. The Brooklyn Society has set them an example which they might well follow with advantage to themselves and society at large. The following are the proceedings of the Brooklyn Society, at the meeting held October 15, 1861, somewhat condensed:

President Degrauw in the chair.

Opened by Mr. Mead.

[As these proceedings have got somewhat ahead of us, we take some liberties with our reporter by condensing our own remarks, and saving a couple of pages. We will simply say, that we commended Mr. Burgess's seedling Dahlia and Daphne cneorum; praised the fine seedling Carnations of Dailledouze and Zeller, besides presenting them a handsome silver cup in behalf of the Society; spoke of the Pears from Mr. Skeele; pointed out the beauties of the rare plants presented by Mr. Hamlyn; explained the mode of girdling Mr. Hite's vine to produce early fruit; expatiated on the fine collection of grapes from Mr. Caywood, of Modena, such as the Concord, Diana, Union Village, Montgomery, etc., during which we gave the history of the Montgomery for thirty years past, spoke of its fitness for cultivation in yards, and called upon Mr. Caywood to state the conditions under which he grew it, to which he responded as follows:]

Mr. Caywood stated that the preparation of the soil made for it was good ground, trenched two feet deep, and applied what manure was necessary; is about as late as the Isabella, or later; agrees with Mr. Mead that city yards is the proper place for it. But in Poughkeepsie they are setting it out by hundreds. It is growing there and producing good fruit.

The large Grape from Mr. Trowbridge's grounds, was from an Isabella vine that had first been layered eight feet; next year 8 feet more; and the third year it would not reach, but was brought up in the passage way, and but one bud above ground. The adjoining vines grow common fruit, while this grows large size fruit: its leaves are not lobed or pointed like the Isabella; suppose it to be a freak of nature.

Mr. Mead—Mr. Caywood has now told us about these grapes, and those present can judge for themselves. In protected city yards, the Montgomery Grape can be grown; but all should be satisfied that Grapes are hardy before planting them, since they are to last a hundred years or more; advises Mr. Caywood to sell it for yards or glass. The Golden Chasselas exhibited by Mr. Wells is like it. If we can find a foreign vine hardy, and that will ripen its fruit, we shall have made an acquisition. Has tried to grow foreign Grapes in open air, and succeeded well with young vines, but when older, the mildew killed them; and others have had the same experience. In city yards, where protected, and stones and brick become heated, it does well; that is somewhat like a house. Reflected heat from walls is also beneficial. Will now take up the regular discussion for the evening: "The cultivation of the Grape in city yards." Propose to commence at the beginning; have not yet done so; can take up side issues again, and discuss the merits of the foreign and native. It remains with you, Mr. Chairman, to call us to order. Called on Mr. Fuller.

Mr. Fuller—As Mr. Mead calls up the subject of cultivating Grapes in city yards, I will confine my remarks to that. I think the subject worthy of the attention of the Brooklyn Horticultural Society. There are thousands of vines planted every year, and not twenty per cent. of them succeed; but the success of the few encourages the masses. All should plant more vines, and encourage a luxury that no family ought to do without. The failures are generally from a bad selection of kinds, and bad training.

For one vine, dig a hole four feet square and two feet deep; put in three-fourths soil, and one fourth well-rotted manure, stirred well together; cover the roots four or five inches deep; can

grow grapes in any city yard where there is room and the sun can get to them. The most simple manner of training is that known as the horizontal arm system. The first year grow a strong large cane by pinching in the laterals; the second year cut down and start two canes about eighteen inches from the ground, rubbing off all other buds; grow two strong canes, and the third year cut them down to four feet in length, and bend one to the right, and the other to the left, horizontally; rub off the buds on the under side of the arms, and grow upright canes from the buds above, which will give from three to four bunches of grapes; on some short-jointed varieties like the Delaware, take out every other bud on the upper side, or the fruit will be crowded. The upright canes from the arms should be kept pinched in, that they may not exceed their limits; this ripens the wood and enlarges the fruit. The fourth year cut these canes down to one strong bud each, from which get other fruiting canes. A vine like this is then considered established. If we wish to fruit higher up on the trellis, grow the two arms above the first vine, or twine two vines together until the top of the first vine is reached; then, as before, train the horizontal arms, the vine trained above being planted midway between the two lower ones. Borders in city yards are generally too narrow, in which cases the earth underneath the walk should be enriched, or the vine may be planted on the other side of the walk and carried under it, and they will do as well as in a full-width border. Of varieties, the Delaware is the very best. The Diana is very fine, and has a peculiar musky aroma, not liked by all. The Hartford Prolific is the best early good black grape we have ever seen. Concord is better, but not quite so early. Rebecca is a fine white variety. Allen's Hybrid and Cuyahoga are new white grapes that promise well. These seven varieties will afford much better grapes than are usually eaten here.

Mr. MEAD approved of Mr. F.'s remarks, but he did not say enough about the soil; called on Dr. Grant.

Dr. GRANT undertakes it with reluctance, yet feels that he is able to treat the subject. First, the ground should be prepared of sufficient depth, which is easily done in Brooklyn, and we will go to the matter of enrichment; it must be permeable, but, at the same time, not too open. The vines fail on some Long Island soils that do not have sufficient retaining power; in depth great range is allowed—least, eighteen inches; greatest, two to three feet—below that can not be maintained; that depth, with well-mixed soil, can not suffer from drought if sufficient permeability be had by draining.

Mr. BRIDGEMAN uses thoroughly decomposed manure and fresh virgin soil from old pastures; eighteen inches in depth might do, but two and a half feet is better; use bone dust or chips well worked with soil. No heated manure should be placed in contact with the roots; overmanuring is a common practice, and very bad; a general fault with every body to over-manure small places; they make the soil too rich; has had complaints of roses not doing well, and, on investigation, found them too richly manured. Generally, there is very little good soil in city yards; lime and rubbish are left by contractors, and covered with a slight coating of soil. Make beds far enough from house, so as not to be affected by drought, caused by the heat on the interior of the building, the rubbish filled in around it.

Mr. MEAD said, neither of the speakers has said any thing about the addition of foreign substances; wants something else added besides manure. Add some kind of carbonaceous matter to give permanence to the soil and quality to the fruit; best carbonaceous matter is muck; all gardeners and florists make use of it; advise all to get one load, and put with it a little lime, a little bone dust, and a little ashes, and less manure than usual; does not object to stimulate the vine at first, and without manure it can not be done.

Mr. FULLER wished to know how much is a little lime, a little ashes, &c.

Mr. MEAD, will tell you: Put half a bushel of lime to a load; or spread the load six inches deep, and make it white by sprinkling with lime—a little bone dust is half a bushel. Make a compost of thoroughly rotted manure and garden soil; mix them half and half—presumes Mr. Fuller knows what "half and half" is—fill the hole six inches deep; then put in six inches of natural soil, then two or three inches of compost above the roots; make border six feet wide; if four feet wide, the vines should be six or eight feet apart; if eight feet wide, may be four feet apart. If the border outside of a hole four feet square is good, the vine will run out; a friend had all his vine roots run towards a muck bed near by; where a soil of good kind is furnished vines, roots will leave it with reluctance, and I infer from this they may be fed at home. Had remarked to a professor at New Haven that vines were endowed with a certain kind of instinct, which the professor said could not be so, they not having a nervous system; but certain manifestations in animals are called instinct, and similar ones in plants should be called the same.

Three questions handed in by a lady:

1st. What is the best way to send flower seeds to Australia?

2d. What is the best way to send plants to Australia?

3d. What is the best time to propagate vine cuttings?

Objected to by Chairman as out of order.

Mr. MEAD—Mr. Chairman, we told the ladies they could ask any thing they pleased, and at any time. Then, again, is a lady ever out of order? (Permitted.)

1st. Seeds can be sent to any country in air-tight cases. They are the best.

2d. Wardian cases are the best known things to send plants in; Mr. Fortune had sent plants to the London Horticultural Exhibition from Japan, which had arrived in good order.

3d. Best time is in the spring.

Mr. BRIDGEMAN—

1st. Fill in between the seed papers with chaff or granulated cork, and place in tin boxes and solder tight.

2d. Received three Wardian cases last summer from Australia; after a three months' voyage the plants were perfectly green and healthy; had great difficulty in tempering them to the air; saved three-fourths; this is the safest way; generally lose half or two-thirds of tender or soft wood plants when imported from England; plants should not be packed too close together.

Mr. MEAD called the attention of those present to the death of Mr. John Humphries, who died that morning. Since the formation of the society he has been one of its most active members, and his loss is a serious one indeed to the Society. As an exhibiter he took a forward and prominent part; was always ready to work, and offered his plants freely. As a grower of specimen plants, he had but few equals, and as a Fuchsia grower no one surpassed him. He will be missed as a valuable member of the Brooklyn Horticultural Society. He suggested all the members should attend his funeral.

One word more about grapes.—Other exhibiters have received prizes for choice displays, and some notice is due to Mr. Caywood, of Modena, Ulster county, N. Y., who has put upon the table, to-night, a choice display of native grapes.

Thanks of the meeting voted.

Suggested that grape culture be continued over to the next meeting. Would appropriate one hour to miscellaneous business, and one hour to the regular subject; an hour or half an hour, how to grow plants or select bulbs, and to answer questions.

Mr. FULLER suggested commencing a little earlier and quitting earlier. Proposed to begin at seven or half past seven, and quit at half past nine.

Mr. CAYWOOD said the falling of the Concord is a new idea to him; does not wish to take exceptions to the source from which it came; his grapes are still on the vine, and exposed to heavy west gales.

Mr. BRIDGEMAN—Other causes than transportation may make the Concord drop its fruit. This remark of Mr. Mead's is not intended to condemn the grape; dropping its fruit is not habitual, and is new to him.

Mr. FULLER had sent the Hartford Prolific 1000 miles without dropping the berry; thinks it all in culture.

Mr. MEAD—The tendency of the Hartford Prolific and the Concord, when fully ripe, is to drop their fruit; he has given the Concord a prominent place; was the first to speak a good word for it; these Grapes have nothing to attach them to the peduncle, no core like the Isabella. As vines get older the berry adheres better; mentions this that all may notice it, and be on their guard; whole boxes of the Concord have come to market this season with detached berries. The Concord Grapes on the table will not be ripe for a week. Directed to pass them around to the ladies, and the Society adjourned until the 29th October.

Gladiolus. *Mrs Reynold's Hole.*